

West Virginia Department of Environmental Protection
Division of Water and Waste Management

**Workflow Based Agentic AI, Automation, and E-Permitting
System**

Technical Proposal

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KnowledgeView AI Permitting Platform

Solicitation No.	CRFP 0313 DEP2600000003
Procurement Description	Workflow Based Agentic AI, Automation, and E-Permitting System
Prepared For	West Virginia Department of Environmental Protection
Prepared By	Business Solutions and Technologies, LLC dba BizSolutions.Tech
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Proposal Date	June 10, 2026
Authorized Signature	<i>Michael R Stockman</i>

Prepared: May 2026

Cover Letter

Dear Evaluation Committee Members,

BizSolutions.Tech is pleased to submit this technical proposal in response to CRFP 0313 DEP2600000003 for a Workflow Based Agentic AI, Automation, and E-Permitting System for the West Virginia Department of Environmental Protection, Division of Water and Waste Management.

We propose KnowledgeView, a secure, cloud-native AI permitting platform that combines workflow orchestration, agentic AI, retrieval-augmented generation, document intelligence, GIS analysis, and mandatory human-in-the-loop governance. The solution is designed to accelerate UIC Class I and Class VI permitting while preserving regulatory control, transparency, auditability, and human decision authority.

BizSolutions.Tech is a West Virginia-based, veteran-owned business with deep experience in enterprise workflow platforms, implementation, integration, training, and AI-enabled modernization. We are committed to building solutions that strengthen West Virginia and provide measurable value to the State.

Sincerely,

Michael R Stockman

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Founder and CEO
Business Solutions and Technologies, LLC dba BizSolutions.Tech

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1. Executive Summary

KnowledgeView is BizSolutions.Tech's proposed AI-enabled permitting platform for WVDEP. The platform is designed to support UIC Class I and Class VI permit review through controlled agentic workflows, human-in-the-loop decision gates, source-grounded AI recommendations, geospatial analysis, document intelligence, and comprehensive audit logging.

KnowledgeView is designed specifically to meet the operational, regulatory, and auditability requirements outlined in CRFP 0313 DEP2600000003 and Addendum #1. The solution addresses the solicitation's core objectives: workflow-based agentic AI, automation support, e-permitting, GIS integration, OCR/document processing, RAG/GraphRAG, mandatory HITL approvals, security, data ownership, token usage transparency, and long-term support.

KnowledgeView is designed to be deployed in a FedRAMP Moderate authorized cloud environment, and to align with NIST SP 800-53 control expectations, Section 508 accessibility requirements, and WVDEP security and data governance needs. The platform is not a black-box AI system; it is a governed review platform where AI assists and humans approve.

2. Understanding of the WVDEP Requirement

WVDEP seeks a comprehensive system to streamline review of Underground Injection Control Class I and Class VI permit applications. These permitting processes are complex because they involve technical data, regulatory checklists, geologic information, GIS layers, document-heavy submissions, public notice procedures, deficiency management, and defensible final decisions.

The solicitation requires more than general AI. It requires a workflow-based platform that can execute structured regulatory review tasks, maintain human oversight, validate supporting data, integrate geospatial information, generate draft documents, and preserve auditability throughout the lifecycle.

2.1 Definitions Compliance Statement

KnowledgeView follows all Section 1.2 definitions, including Agentic AI, HITL, GraphRAG, and XAI, to ensure alignment with WVDEP terminology.

2.2 Proposal Compliance and Legal Statement

BizSolutions.Tech accepts all General Terms and Conditions of this RFP without exception and confirms compliance with all mandatory requirements ("shall", "must", and "will") stated within the CRFP solicitation and addendum #1 documents.

2.3 Key WVDEP Needs Addressed

- Accelerated administrative completeness review for Class I and Class VI applications.
- Technical compliance analysis grounded in regulatory requirements and submitted evidence.
- GIS-enabled Area of Review and risk analysis support.
- OCR and document intelligence for large application packages and engineering attachments.
- Mandatory human approval gates before deficiency notices, permit drafts, and final decisions.
- Source-grounded AI with citations, confidence scoring, and explainability.
- Security, privacy, data ownership, and long-term exit strategy controls.

3. About BizSolutions.Tech

Business Solutions and Technologies, LLC dba BizSolutions.Tech is a Charleston, West Virginia-based, veteran-owned technology consulting firm. We bring decades of experience in IT implementation, workflow platforms, integrations, training, and intelligent systems. We have delivered solutions for customers ranging from local organizations to large enterprise environments and are committed to growing technology capability in West Virginia.

BizSolutions.Tech combines hands-on implementation expertise with a practical teaching approach. We focus on building solutions that users can understand, adopt, and sustain. This is especially important for AI-enabled systems, where trust, transparency, and user confidence are as important as technical capability.

4. About KnowledgeView

KnowledgeView is BizSolutions.Tech's AI-enabled workflow platform designed to help organizations process complex information, apply structured rules, and make defensible decisions. KnowledgeView embeds AI agents inside governed workflows so that AI performs analysis, drafting, summarization, retrieval, and recommendations while human reviewers retain control over critical actions.

4.1 KnowledgeView Core Capabilities

- Agentic workflow orchestration for multi-stage review processes.
- Human-in-the-loop approvals at mandatory decision points.
- Retrieval-Augmented Generation and GraphRAG for source-grounded recommendations.
- Document intelligence for PDFs, scanned materials, forms, and attachments.
- GIS and geospatial processing for spatial validation and visualization.
- Audit logging of AI actions, human decisions, citations, confidence scores, and workflow transitions.
- Token usage tracking, budget controls, and cost transparency.
- Cloud-native deployment model designed for AWS FedRAMP Moderate alignment.

5. Proposed Solution Overview

BizSolutions.Tech proposes to configure and deploy KnowledgeView as a standalone AI-assisted permitting workspace for WVDEP. The platform will use a serverless-first AWS architecture where FedRAMP-authorized services are available, while keeping the application, AI workflows, data processing, logs, and model integrations inside the FedRAMP Moderate boundary. KnowledgeView will support applicant intake, document processing, AI-assisted review, GIS workflow support, HITL tasks, draft document generation, audit logging, and export packages for human-mediated updates to agency systems.

5.1 Solution Principles

- AI assists; humans decide.
- Every recommendation is grounded in source evidence.
- Every critical action is auditable.
- Legacy systems are protected through standalone workflow and export-based synchronization.

- Costs are visible through token metering and budget controls.
- Security and compliance are built into the architecture, not added later.

6. Alignment to Evaluation Criteria

Evaluation Area	KnowledgeView Alignment
Project Goals and Proposed Approach	KnowledgeView directly supports agentic workflows, RAG/GraphRAG, GIS integration, document processing, HITL approval gates, and AI drafting.
Mandatory Project Requirements	The architecture addresses data formats, compliance engine, security, FedRAMP Moderate hosting path, RBAC/MFA, SSO, auditability, Section 508, data ownership, and exit strategy.
Qualifications and Experience	BizSolutions.Tech brings enterprise workflow implementation, cloud deployment, integration, training, and AI platform development experience.
Oral Presentation Readiness	The proposed demo flow will show intake, AI analysis, citations, HITL review, GIS visualization, draft generation, audit trail, and token tracking.

7. Functional Response to WVDEP Goals

7.1 General Automation and Dashboard Integration

KnowledgeView will provide a central web dashboard for application status, AI processing activity, HITL tasks, reviewer queues, audit events, token usage, and system health. The dashboard will be protected through role-based access, MFA/SSO, and application-level authorization. Where available and approved within the FedRAMP boundary, the dashboard and supporting APIs will use serverless services such as API Gateway, Lambda, Step Functions, EventBridge, S3, DynamoDB, and managed monitoring services.



Figure 1 - KnowledgeView Dashboard Concept

7.2 Digital Intake Specialist

KnowledgeView will function as the Digital Intake Specialist by accepting authenticated permit application packages, identifying application type, extracting submitted materials, validating required documentation, and routing the application to the appropriate Class I or Class VI workflow. Consistent with Addendum #1, external applicants will authenticate through OneLogin or another approved identity flow; unauthenticated guest submissions are not assumed.

7.3 Agentic Routing and Sub-Workflow Orchestration

The workflow orchestrator will route work to specialized AI agents based on detected data, application type, and review status. Sub-workflows will support administrative completeness, AoR analysis, technical review, financial responsibility verification, corrective action planning, permit drafting, public notice preparation, and response-to-comments support.

7.4 Administrative Completeness Review

The completeness agent will compare submitted application content against WVDEP-approved checklists for Class I and Class VI applications. The review will include project plans, site maps, AoR calculations, EPA Form 7520-6, facility location/legal description, operator identification, well construction details, injection zone information, confining zone characterization, proposed rates/volumes/pressures, injection fluid characterization, and Class VI-specific materials such as geologic characterization, TMP, plugging plan, PISC plan, emergency/remedial response plan, financial responsibility documentation, and certification/signature checks where technically feasible.

7.5 Technical Compliance Review

The technical review agent will extract and organize submitted technical information such as injection zone data, confining zone characterization, well construction details, operational parameters, proposed pressures and volumes, monitoring plans, and AoR modeling inputs. KnowledgeView will not perform reservoir simulation or CO2 plume modeling. Instead, it will identify, account for, and validate parameters stated in the application so WVDEP technical reviewers can complete authoritative engineering, geologic, GIS, and regulatory analysis.

7.6 RAG, GraphRAG, and Source Grounding

KnowledgeView will use RAG to retrieve relevant regulatory requirements, application content, prior permit context, and supporting technical references before generating recommendations. GraphRAG capabilities will be used to represent relationships among regulations, wells, formations, documents, GIS features, review findings, and permit conditions.

7.7 Hallucination Mitigation

KnowledgeView will mitigate hallucinations through retrieval grounding, structured prompts, evidence requirements, output validation, confidence scoring, policy guardrails, reviewer approval gates, and automated checks that prevent unsupported recommendations from advancing without human review.

7.8 Citations and Explainability

All AI-generated findings will include an AI Decision Record that captures the source documents, pages or sections used, extracted facts, relevant regulatory or checklist basis, confidence score, validation result, reviewer action, and approval or override history. KnowledgeView will provide auditable step-by-step decision records rather than relying on raw internal model chain-of-thought, which aligns with Addendum #1 and supports legal defensibility and reviewer transparency.

8. Geospatial and GIS Capability

KnowledgeView will support GIS workflow, ingestion, visualization, evidence capture, and reviewer coordination while recognizing that WVDEP uses ESRI desktop and enterprise tools as the authoritative GIS environment. The platform will not replace WVDEP advanced GIS or modeling tools. Instead, it will capture applicant-provided GIS data, present relevant map context, route GIS review tasks, store reviewer findings, and integrate GIS review outputs into the permitting workflow.

- Upload, store, and associate GIS layers and map evidence with permit applications.
- Support common GIS formats, including Shapefile, GeoJSON, KML, and other agency-approved formats; CAD/DWG and well logs may be handled through conversion workflows or approved tooling.
- Normalize and validate coordinate reference systems when supported by available data and agency standards.
- Support fixed-radius AoR assistance for Class I and accounting/validation of submitted Class VI modeling parameters.
- Capture reviewer-performed ESRI/GIS analysis outputs as workflow evidence and audit records.
- Correlate applicant GIS data with WVDEP-approved sources, WVGES, WV Office of Oil and Gas information, EPA/public sources, and other data made available during discovery.

8.1 GIS Features

- Upload and store GIS layers associated with applications.
- Normalize and validate coordinate reference systems.
- Visualize well locations, AoR boundaries, sensitive receptors, USDWs, faults, nearby wells, and applicant-provided layers.
- Support fixed-radius AoR calculations for Class I and computational-model review support for Class VI.
- Perform topology and data quality checks when supported by available data.
- Correlate applicant GIS data with approved external sources and WVDEP data feeds.

9. Document Processing and AI Drafting

KnowledgeView will process permit documents, forms, maps, attachments, PDF packages, scanned pages, and engineering diagrams using a document intelligence pipeline. Since Addendum #1 (Q11, Q37, and Q38) clarifies that permit packages will often be submitted as PDFs, the initial implementation will focus on PDF parsing, OCR, page/section identification, metadata capture, checklist matching, and reviewer-ready extracted facts.

- PDF ingestion, parsing, classification, and secure storage.
- OCR for scanned or image-based PDF pages.
- Checklist-based completeness determination against Class I and Class VI regulatory requirements.
- Signature and certification statement detection where technically feasible.
- Engineering diagram extraction support for PDF-based well construction details, with CAD/DWG support through conversion or approved tooling if needed.
- Draft Notice of Deficiency generation for human review and approval.
- Draft permit condition generation using WVDEP templates and approved regulatory language.
- Public notice and response-to-comments drafting support, with substantive items routed for reviewer decision.

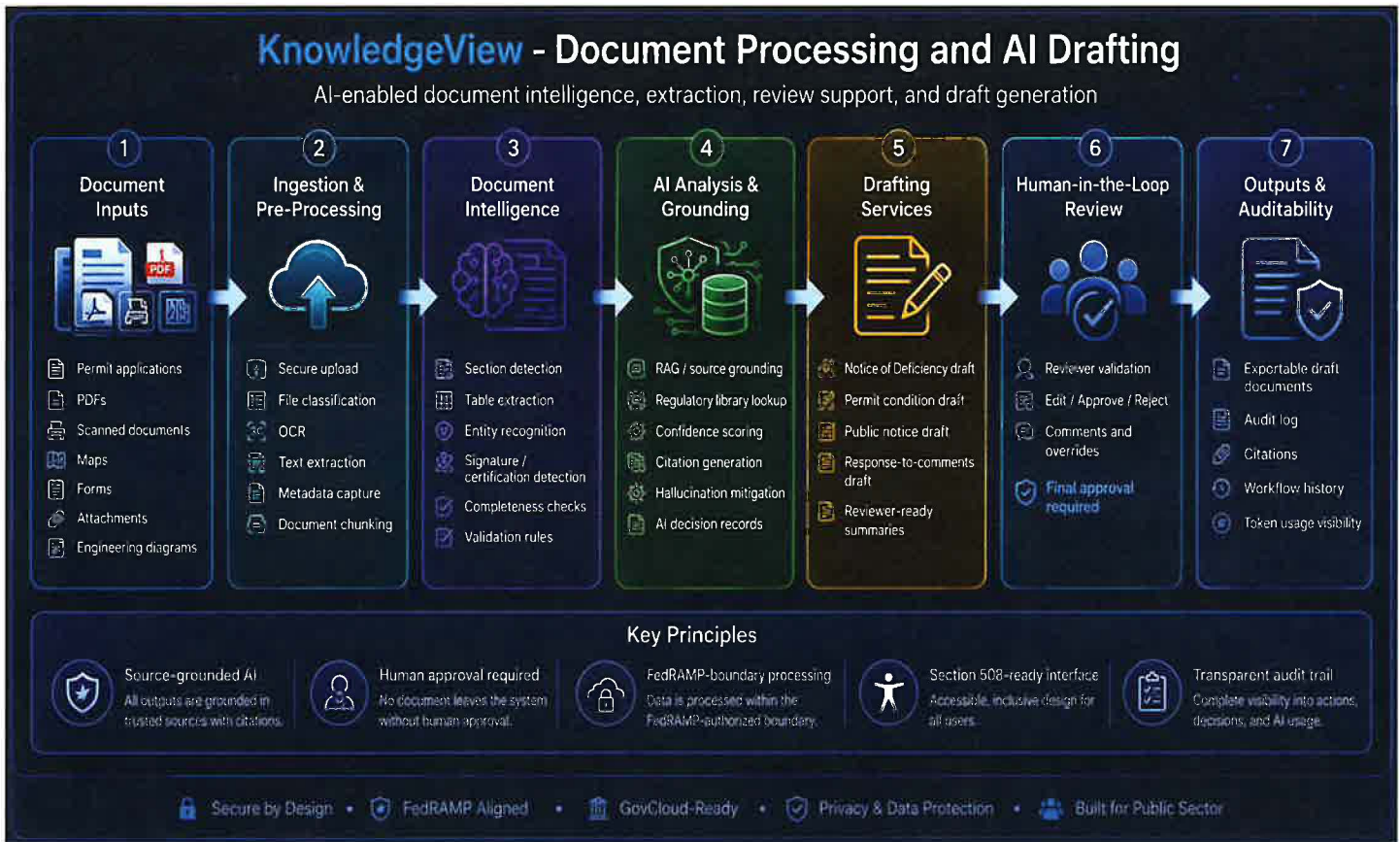


Figure 2 – KnowledgeView – Document Processing and AI Drafting

9.1 Document Capabilities

- PDF ingestion and parsing.
- OCR for scanned pages and image-based documents.
- Checklist-based completeness determination.
- Signature and certification statement detection where technically feasible.
- Engineering diagram extraction support for well construction details.
- Draft Notice of Deficiency generation.
- Draft permit condition generation using WVDEP templates.
- Public notice and response-to-comments drafting support.

10. Human-in-the-Loop Workflow Interface

KnowledgeView will provide a standalone HITL workflow interface that operates independently from legacy systems. The platform will route AI-generated requests to human reviewers, present evidence and recommendations, capture approval, rejection, confidence-threshold escalation, and override reasons, and generate export packages for reviewer-controlled updates. The AI will not autonomously issue, deny, transmit, or finalize permits.

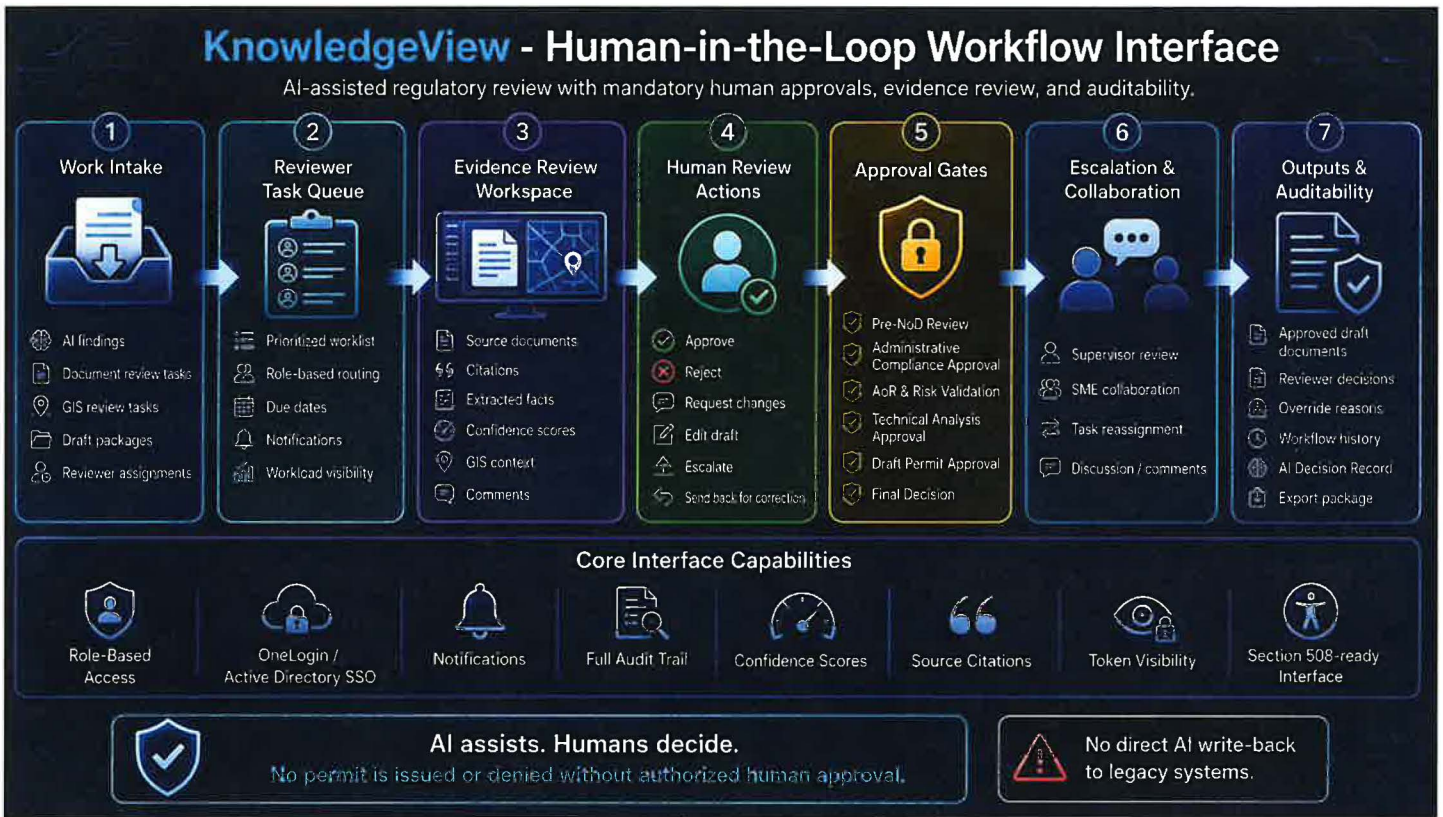


Figure 3 - KnowledgeView - Human in the Loop Workflow Interface

10.1 Mandatory Human-in-the-Loop (HITL) Decision Gates

HITL Gate	Trigger	Required Human Action
Pre-NoD Review	Application intake complete; missing materials identified.	Reviewer verifies deficiency list before NoD draft is finalized.
Administrative Compliance Approval	Fees, ownership, and public notice requirements identified.	Supervisor approves compliance path or requests deficiency action.
AoR and Risk Validation	Initial technical parameters and AoR findings available.	Reviewer validates AoR and risk findings.
Technical Analysis Approval	Technical review and corrective action findings complete.	Senior reviewer validates findings and permit conditions.
Draft Permit Approval	Draft permit generated.	Reviewer approves draft before public comment.
Final Decision	Public comment and response process complete.	Authorized human executes final issue or denies decision.

11. Legacy System Independence and Integration

Addendum #1 clarifies that the base integration scope is focused on WV One-Stop Shop Permitting (OSSP) for reporting/payment, OneLogin for external access, and Active Directory for internal access. AppEnhancer integration, ESS write-back, and historical Class I/Class VI migration are not included in the base scope. KnowledgeView will protect

legacy systems by avoiding direct AI modification of ERIS, ESS, AppEnhancer, or other agency records systems unless a future controlled integration is approved.

- Inbound application data will be received through approved portal, OSSP, secure gateway, or agency-designated intake mechanism.
- External users will authenticate through OneLogin or an approved identity flow; internal users will authenticate through Active Directory/SSO.
- AI review, HITL decisioning, and audit logging occur inside KnowledgeView within the FedRAMP Moderate boundary.
- Outbound updates will be packaged as structured exports, review summaries, status updates, draft documents, and approval evidence for human-mediated updates to agency systems.
- Future API, database, or file-based integrations may be added through change control when WVDEP provides interface specifications.

12. Technical Architecture

KnowledgeView will be implemented using a secure, modular, serverless-first cloud architecture in AWS FedRAMP Moderate authorized environment. The architecture will use serverless and managed services where practical and FedRAMP-authorized, while using containerized services only where needed for specialized workloads such as AI orchestration, geospatial processing, or model hosting. The application, workflows, data stores, AI processing, logging, and third-party model endpoints will remain inside the approved FedRAMP boundary. ***See Appendix A: Detailed Architecture Diagram.***

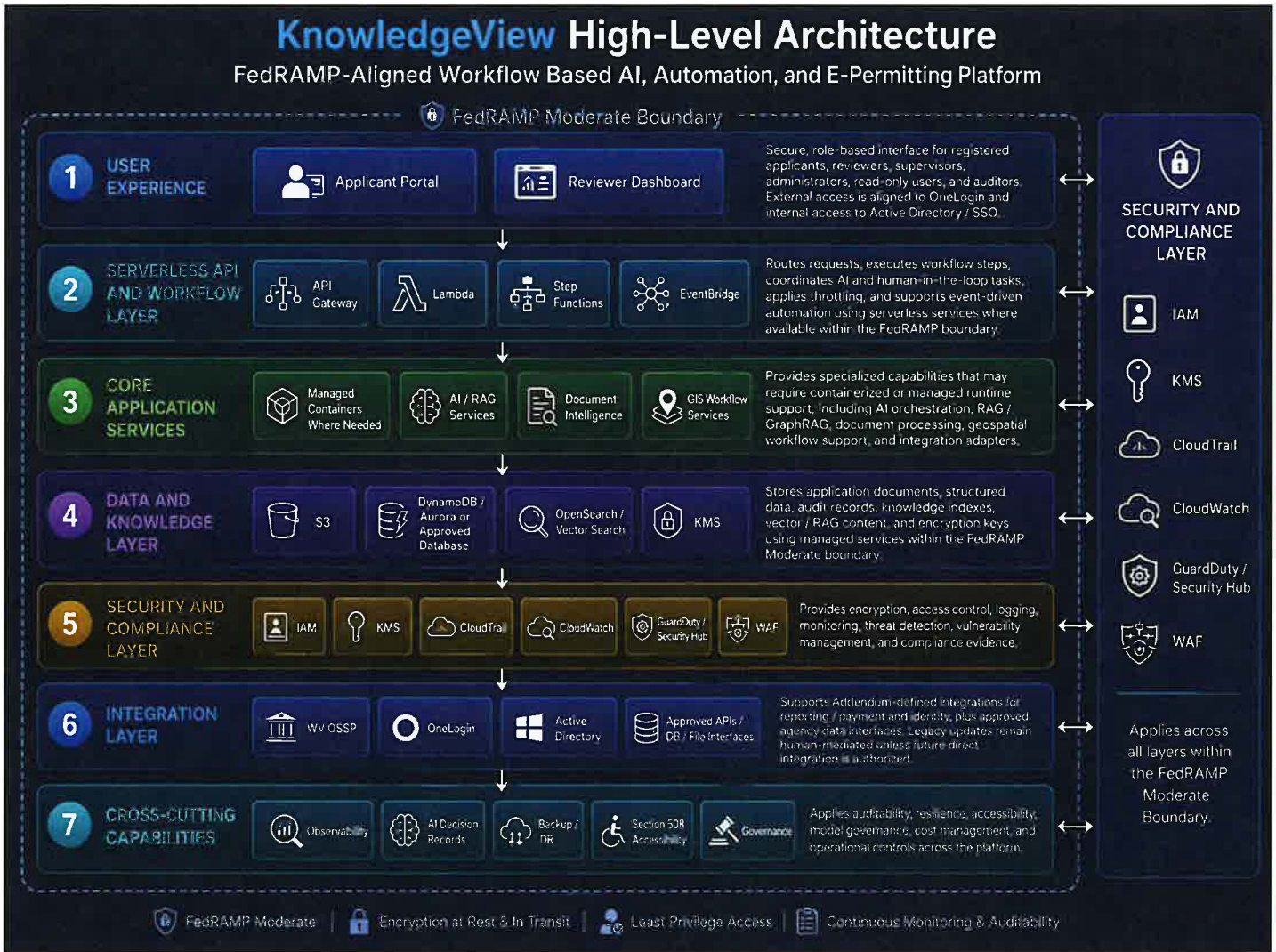


Figure 4 - KnowledgeView Architecture

12.1 Architecture Components

Layer	Main Components	Description
Pre-NoD Review	Application intake complete; missing materials identified.	Reviewer verifies deficiency list before NoD draft is finalized.
User Experience	Applicant Portal, Reviewer Dashboard	Secure, role-based interface for registered applicants, reviewers, supervisors, administrators, read-only users, and auditors. External access is aligned to OneLogin and internal access to Active Directory/SSO.
Serverless API and Workflow Layer	API Gateway, Lambda, Step Functions, EventBridge	Routes requests, executes workflow steps, coordinates AI/HITL tasks, applies throttling, and supports event-driven automation using serverless services where available within the FedRAMP boundary.
Core Application Services	Managed containers where needed, AI/RAG services, Document Intelligence, GIS Workflow Services	Provides specialized capabilities that may require containerized or managed runtime support, including AI orchestration, RAG/GraphRAG, document processing, geospatial workflow support, and integration adapters.

Data and Knowledge Layer	S3, DynamoDB/Aurora or approved database, OpenSearch/Vector Search, KMS	Stores application documents, structured data, audit records, knowledge indexes, vector/RAG content, and encryption keys using managed services within the FedRAMP Moderate boundary.
Security and Compliance Layer	IAM, KMS, CloudTrail, CloudWatch, GuardDuty/Security Hub, WAF	Provides encryption, access control, logging, monitoring, threat detection, vulnerability management, and compliance evidence.
Integration Layer	WV OSSP, OneLogin, Active Directory, Approved APIs/DB/File Interfaces	Supports Addendum-defined integrations for reporting/payment and identity, plus approved agency data interfaces. Legacy updates remain human-mediated unless future direct integration is authorized.
Cross-Cutting Capabilities	Observability, AI Decision Records, Backup/DR, Section 508, Governance	Applies auditability, resilience, accessibility, model governance, cost management, and operational controls across the platform.

13. Security, Privacy, and Compliance

KnowledgeView will be designed to meet the security, privacy, and compliance expectations of a public sector SaaS environment. Production deployment will use AWS FedRAMP Moderate authorized environment, and the application architecture will keep all AI workflows, data processing, logs, and model integrations inside that boundary. AWS FedRAMP artifacts, platform evidence, and KnowledgeView application controls will support WVDEP review and authorization activities.

- TLS 1.3 or approved equivalent encryption in transit and KMS-managed AES-256 encryption at rest.
- Role-Based Access Control for applicant, reviewer, senior reviewer, supervisor, administrator, read-only, and auditor roles.
- MFA and SSO integration using OneLogin for external users and Active Directory/SAML/OIDC for internal users where available.
- PII and Confidential Business Information handling through classification, tagging, least privilege, encryption, redaction/masking where appropriate, and audit logging.
- No use of unsecured public consumer AI tools for WVDEP data or workflows.
- Annual third-party penetration testing, vulnerability scanning, remediation tracking, and critical vulnerability patching within required timeframes, including 30 days where applicable.
- CloudTrail, CloudWatch/application logs, security monitoring, incident reporting support, and exportable security/access reports.
- Section 508 conformance through accessible UI components, keyboard navigation, appropriate contrast, form labels, screen-reader support, and accessibility testing before acceptance.
- FedRAMP, StateRAMP, SOC 2 Type II, or equivalent evidence provided through hosting/platform partners, with a plan of action for any additional audits or certifications required during implementation.

14. AI Governance, Safety, and Validation

KnowledgeView uses AI as a controlled decision-support capability. It will not autonomously issue, deny, or finalize permits. Critical regulatory actions remain subject to human review and approval. The AI governance model will be

model-agnostic and will support commercial or open-source models approved by WVDEP/WVOT, provided they operate entirely within the required FedRAMP Moderate boundary.

- Prompt injection defense, malicious document detection, unsafe approval prevention, and policy guardrails.
- Source-grounded generation with required citations and validation checks before findings are presented for approval.
- AI Decision Records capturing prompts/task metadata, extracted data, sources, confidence scores, validation results, reviewer actions, overrides, and approvals.
- Confidence thresholds that automatically route low-confidence findings to senior reviewers.
- Reviewer override capability at all decision points, including required reason capture and audit logging.
- Model performance monitoring, drift detection, error trend analysis, and annual AI governance reporting.
- Approved training/reference data inventory, including WVDEP-provided SOPs, regulatory requirements, templates, and available example materials.
- Adversarial validation and red-team testing for AI workflows before production launch and during ongoing operation.
- Human approval required before Watchdog Agent recommendations change compliance engine logic.

15. Volumetric Token Usage Model

KnowledgeView provides a transparent, auditable, and scalable approach to AI token usage aligned with WVDEP's volumetric assumptions, and cost predictability requirements and is designed to enable WVDEP to proactively manage AI costs. KnowledgeView will include the following token cost control capabilities:

- **Usage Tracking & Visibility:** Token usage will be tracked by Application, Workflow stage, Agent/model, User and document set. This tracking enables granular cost attribution and operational analysis:
- **Monitoring & Alerts:** Configurable thresholds and budget alerts and Real-time dashboards to show consumption trends, remaining allocation and high-usage workflows.
- **Optimization Strategies:** Model routing based on task complexity, caching and reuse of prior outputs, document chunking and controlled context windows, and retrieval-based processing (RAG) to reduce redundant usage.
- **Model Efficiency Controls:** Lower-cost models are used for routine tasks like classification, extraction, and summarization (to strategically reduce cost without compromising on quality). Higher-capability models are purposefully reserved for technical analysis, and HITL decision support.
- **Audit & Invoice Reconciliation:** Detailed usage reports support invoice validation, contract compliance, and operational tracking.
- **Contractual Usage Controls:** Usage is capped at authorized MTOK allocation. No overage occurs without formal State approval and executed change order. All consumption remains controllable and auditable

Token Usage and Cost Management

Simple usage tracking with DynamoDB and dashboard visibility

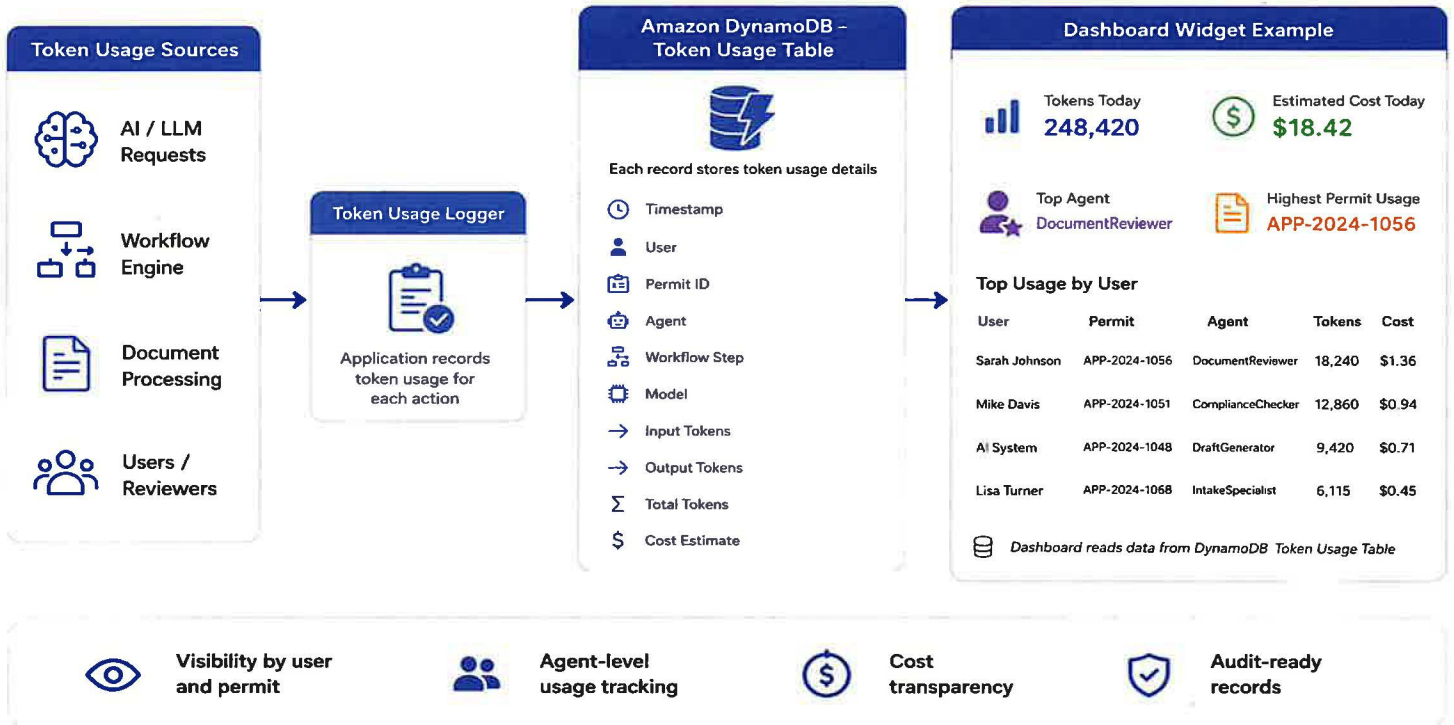


Figure 5 - Token Usage and Cost Management

15.1 Estimated Token Usage (Volumetric Model)

The token estimates within Table 1 and Table 2 below are calculated using the provided *Estimated Volumetrics for Pricing* (re. CRFP Section 1.3) following the format for Attachment B and the expected AI processing required for each major workflow activity. Each estimate reflects the approximate amount of text, document content, prompts, model responses, summaries, extracted data, and review explanations processed during that activity.

Based on the provided estimated volumetrics for pricing, KnowledgeView is expected to consume approximately **10–15 million tokens per application**, depending on application size, document volume, and review complexity. These estimates support the planned processing activities and fall within the proposed **250 MTOK** contractual capacity range.

15.1.1 Table 1 – Higher Volume Scenario

The high estimate depicted in Table 1 below represents an average planning assumption for a full permit application specifically with a 1,500-page permit.

TABLE 1 Sample of Token Usage; Higher Range of Volumetrics Scenario	
Est. Annual Total (20 Applications)	
Processing Activity	Est. Tokens per App (*based on 1500-page permit)

Document ingestion & OCR	2,600,000
Administrative Completeness Review	1,100,000
Technical Compliance Analysis	3,300,000
Geologic/AoR Evaluation	3,500,000
Draft Permit Generation	1,500,000
Public Notice & Response to Comments	2,000,000
HITL Review Support & Explanations	1,000,000
Total per Application (Average)	15,000,000.00 Tokens

**Estimates are for demonstration of higher-range usage patterns only*

15.1.2 Table 2 – Lower Volume Scenario

The low-range estimate depicted on Table 2 below reflects a more conservative usage scenario where documents are smaller, prior summaries or cached outputs are reused, or fewer review iterations are required specifically with a **900-page** permit.

TABLE 2 Sample of Token Usage; Lower Range Volumetrics Scenario	
Est. Annual Total (20 Applications)	
Processing Activity	Est. Tokens per App (*based on 900-page permit)
Document ingestion & OCR	2,000,000
Administrative Completeness Review	1,000,000
Technical Compliance Analysis	2,000,000
Geologic/AoR Evaluation	2,000,000
Draft Permit Generation	1,000,000
Public Notice & Response to Comments	1,000,000
HITL Review Support & Explanations	1,000,000
Total per Application (Average)	10,000,000.00

**Estimates are for demonstration of lower-range usage patterns only*

15.2 Alignment with Contractual Token Allocation

Based on the estimated volumetric range of **2–20 applications annually**, projected token usage ranges from approximately: 200M to 300M tokens per year. The proposed allocation of 250 MTOK (250 million tokens), as defined in Attachment A (Cost Proposal) not only provides sufficient capacity for expected workloads but also supports cost predictability and budget control. BizSolution.Tech assures that token pricing is firm-fixed per Addendum #1 (Q5) and any additional capacity is only permitted through approved change orders.

15.3 Token Usage Assumptions (Clarity for Evaluators)

At a high level the KnowledgeView token model Aligns directly with RFP volumetrics (Section 1.3); Meets required cost transparency (Section 4.3.2.6.4); Complies fully with Addendum #1 token pricing requirements; and Provides WVDEP with predictable, controllable, and scalable AI usage.

The following list is a clarification on how the token estimates reflect the expected processing requirements across major workflow activities:

- Document ingestion and OCR are estimated based on the number and size of submitted documents, the amount of text extracted from PDFs, forms, maps, attachments, and supporting evidence, and the need to prepare that content for downstream AI review.
- Administrative completeness review is estimated based on the expected review of required forms, fields, attachments, signatures, and submission requirements. This activity uses fewer tokens because it is primarily checklist-driven and based on structured completeness criteria.
- Technical compliance analysis is estimated based on the volume of permit content, regulatory criteria, technical evidence, and AI-supported comparison of submitted information against applicable requirements. This is one of the higher-use categories because it requires deeper analysis and explanation.
- Geologic/AoR evaluation is estimated based on the review of technical geologic, Area of Review, well, map, and supporting documentation. This activity is also a higher-use category because it may require analysis across multiple documents and technical references.
- Draft permit generation is estimated based on the amount of structured permit language, conditions, findings, and supporting text generated from reviewed application data. Usage may be reduced where templates, standard clauses, and reusable language are applied.
- Public notice and response to comments is estimated based on the preparation of public-facing summaries, notices, comment categorization, draft responses, and related supporting explanations.
- HITL review support and explanations is estimated based on the AI-generated explanations, reviewer prompts, decision support, exception summaries, and clarifications provided to human reviewers during the approval workflow.

16. Data Ownership, Retention, and Exit Strategy

All WVDEP data will remain the property of the State of West Virginia. KnowledgeView will not use WVDEP data to train models for other customers without explicit written authorization. Data will not be transmitted outside the United States and will remain inside the approved FedRAMP Moderate boundary. AI Decision Records and audit logs will be retained for at least five years unless WVDEP requires a longer retention period.

- Complete data export within 30 days of contract termination in open formats such as PDF, CSV, JSON, XML, and standard document formats.

- Transition assistance for up to 90 days following termination.
- Secure deletion of WVDEP data within 60 days of confirmed transfer.
- Written certification of destruction following secure deletion.
- NIST-approved data disposal methods where applicable.
- Exportable audit records, access logs, AI Decision Records, reviewer actions, and approval history.

17. Implementation Approach and Timeline

BizSolutions.Tech will deliver KnowledgeView using a phased implementation approach aligned to the Addendum #1 target go-live (full production deployment) date of July 1, 2027, with key development milestones outlined on the CRFP Solicitation Document on Section 4.6 (table 4.6.1) and Attachment C. The Digital Intake Specialist and administrative completeness workflow will be prioritized early for stakeholder review, while the full system will be operable before production go-live. Each phase will include security, testing, training, and acceptance activities appropriate to that stage.

ATTACHMENT C UIC Class 1 and 6 Agentic AI System Solution Timeline		
Phase	Estimated Duration	Key Activities
Phase 1: Discovery and Configuration	July 2026 – August 2026	Requirements validation, Addendum alignment, tenant setup, serverless-first architecture confirmation, identity planning, workflow mapping, data source inventory, and FedRAMP boundary/security planning.
Phase 2: Digital Intake and Core Workflow Build	August 2026 – November 2026	Digital Intake Specialist, UIC Class I/Class VI workflow configuration, HITL task queues, dashboard, identity integration planning, and initial checklist automation.
Phase 3: AI, Document, and Integration Development	October 2026 – March 2027	AI agents, RAG/GraphRAG library, PDF/OCR pipeline, NoD/draft generation, OSSP/OneLogin/Active Directory integration, and GIS workflow support.
Phase 4: Validation, UAT, Security Testing	January 2027 – May 2027	Sample/synthetic application testing, SME validation, AI validation, security testing, accessibility testing, HITL workflow validation, and audit/decision record verification.
Phase 5: Pilot, Training, and Production Launch	April 2027 – June 2027	Limited pilot, reviewer training, issue remediation, operational tuning, final readiness review, full production launch by target go-live, and 30-day hypercare.

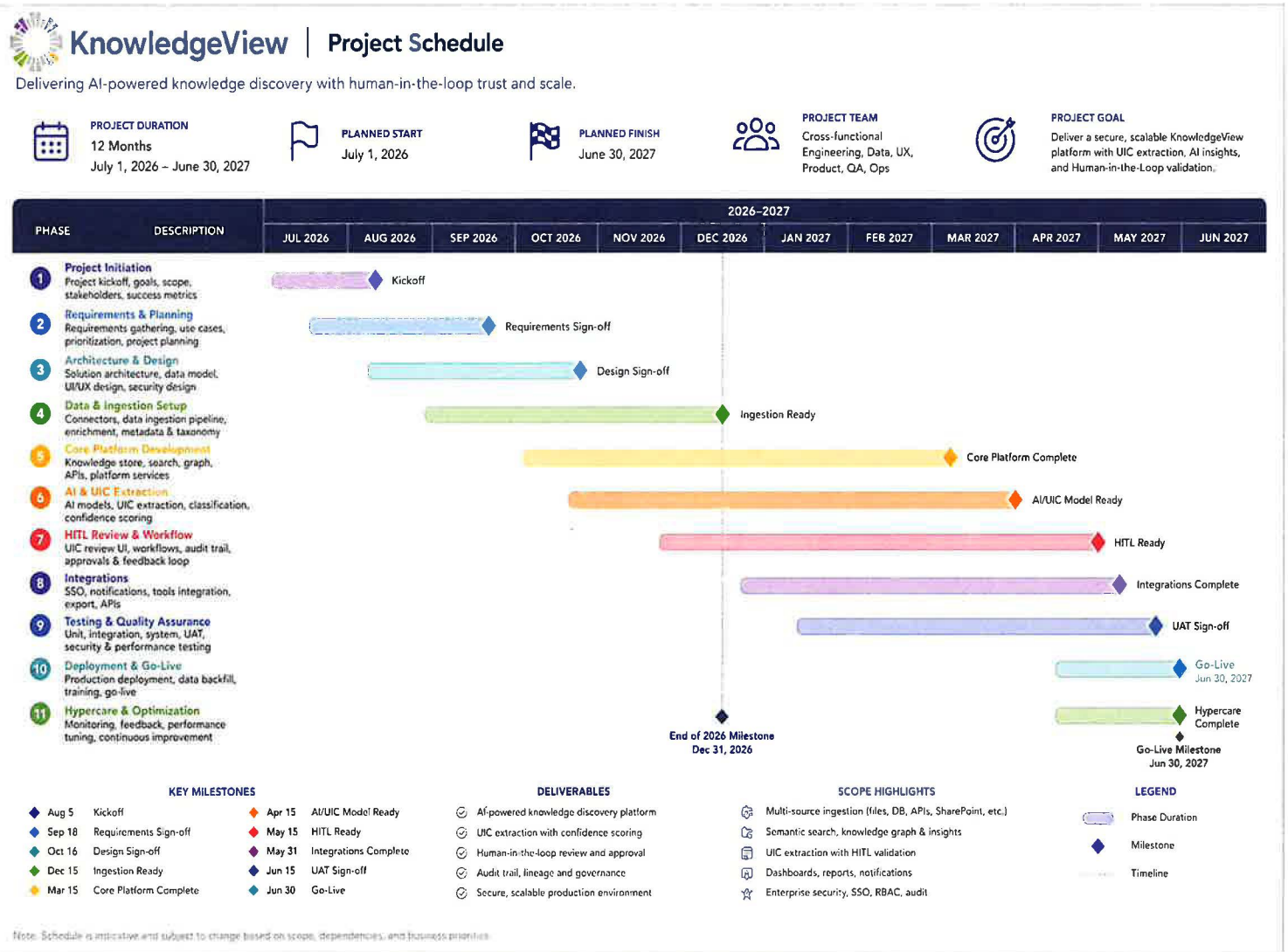


Figure 3 - KnowledgeView Project Schedule

18. Project Governance and Methodology

BizSolutions.Tech will use a structured Agile delivery framework adapted for public sector implementation and regulatory environments, ensuring transparency, control, and compliance throughout implementation. The project will be managed through defined workstreams, iterative sprints, formal governance checkpoints, risk management, SME validation and formal acceptance criteria reviews to ensure alignment with WVDEP requirements, regulatory expectations, and system quality standards.

18.1 Governance Model

All system-impacting changes, including Regulatory Watchdog Agent updates, compliance logic, integrations, and AI model modifications, will require formal governance review and approval prior to release. The key activities include:

- Backlog prioritization aligned to WVDEP priorities
- Sprint-based development with iterative validation
- SME-driven validation of regulatory logic and workflows
- Formal acceptance checkpoints for major deliverables
- Continuous risk, issue, and dependency tracking
- Change control for compliance engine logic, integrations, model selection, and production-impacting releases.

18.2 Governance Cadence

Activity	Frequency	Purpose and Key Activities
Project Status Meetings	Weekly	Progress tracking and issue resolution to ensure project alignment
Sprint Review/ Solution Demonstrations	Bi-Weekly	Validate functionality and gather feedback
Executive Steering Committee Review	Monthly	Strategic oversight and escalation
Risk and Issue Tracking	Continuous	Active mitigation and reporting; A risk and issue log will be an ongoing activity maintained throughout the project.
Acceptance Criteria Reviews	Milestone-Based	Formal acceptance criteria reviews will ensure WVDEP priorities and deliverables remain satisfactory

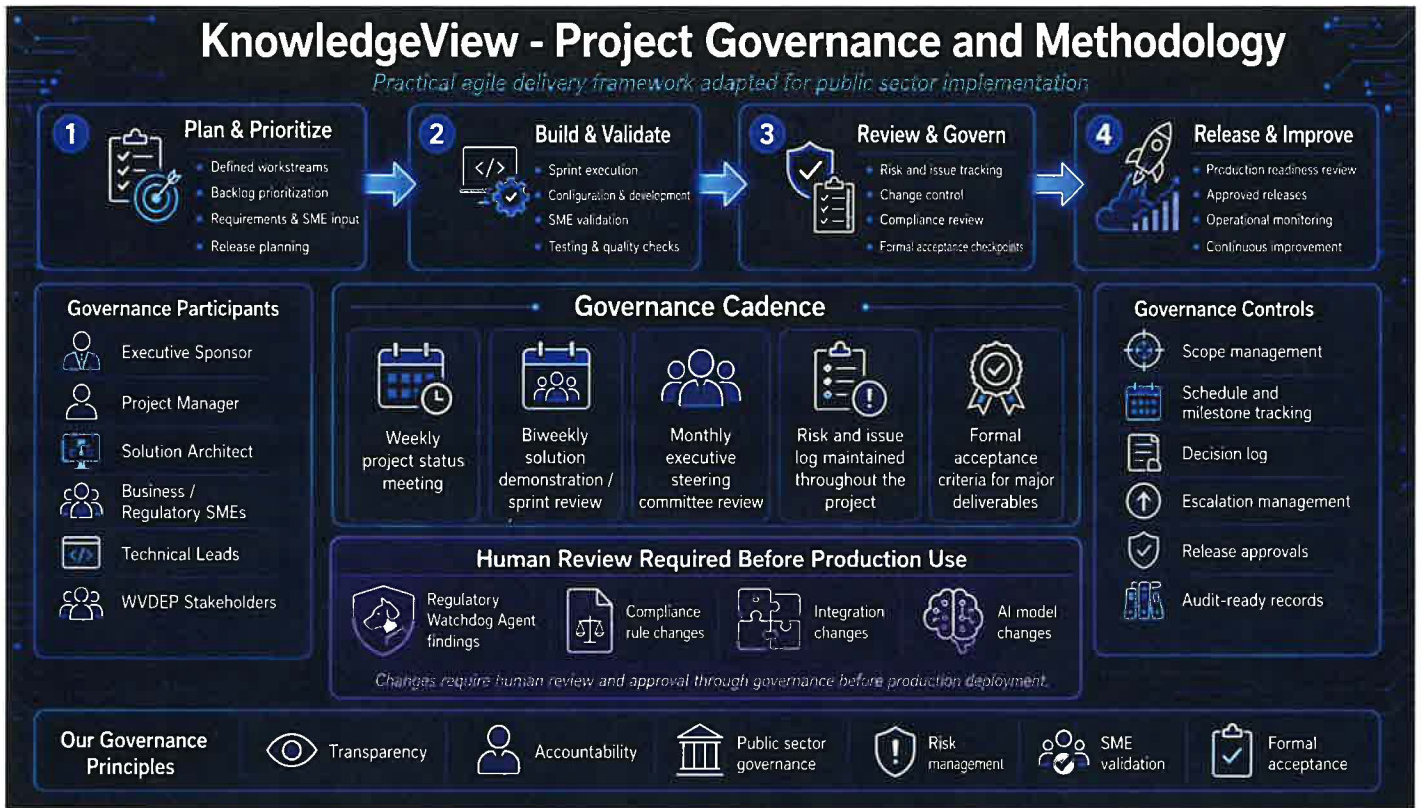


Figure 6 - KnowledgeView - Project Governance and Methodology

18.3 Project Roles and Responsibilities Matrix

High level matrix including the BizSolutions.Tech team and WVDEP team. See section 19.1 for a detailed overview of the BizSolutions.Tech key personnel.

Role	Responsibilities
BizSolutions.Tech Executive Sponsor	Executive oversight, escalation support, and customer relationship management.
Project Manager	Project plan, schedule, risk log, status reporting, and coordination.
Solution Architect	Architecture, security design, workflow model, and integration strategy.
AI Engineer	RAG, agent workflows, validation, model routing, and token controls.
Cloud Engineer	AWS deployment, Terraform, monitoring, encryption, and infrastructure operations.
GIS Specialist	GIS ingestion, coordinate normalization, spatial analysis, and AoR visualization support.
WVDEP Executive Sponsor	Strategic decisions, escalation, and acceptance authority.
WVDEP SMEs	UIC process validation, checklists, templates, data sources, and UAT feedback.
WVDEP Security/IT	Identity, security requirements, ATO support, and environment coordination.

19. Qualifications and Experience

BizSolutions.Tech demonstrates the qualifications, experience, and compliance required to deliver the requested Workflow-Based Agentic AI E-Permitting Solution. This section addresses all requirements identified in RFP Section 4.4 and mapped in Appendix C, including company background, personnel, experience, and mandatory qualifications.

BizSolutions.Tech has delivered AI-assisted workflow automation systems, document intelligence platforms leveraging OCR and RAG, and secure SaaS solutions with role-based access control and audit logging. The company specializes in enterprise software implementation, AI-enabled workflow automation, and secure cloud-native systems supporting complex, data-driven environments. Representative project experience is provided. Client references and contact information for qualification requirements will be made available upon request, subject to confidentiality of client agreements.

The project team combines expertise in:

- Enterprise system implementation and integration
- AI/ML and data-driven workflows
- Process automation and regulatory alignment
- Organizational change management and user enablement
- Secure cloud architectures aligned to NIST and FedRAMP (re. CRFP Section 4.3.3.5)

19.1 Key Personnel and Staffing Plan

Role	Project Members and Delivery Strength	Responsibilities
BizSolutions.Tech Executive Sponsor	Mike Stockman (Founder & CEO, Executive Sponsor) Mike Stockman brings more than 40 years of experience in intelligent systems, enterprise architecture, software development, secure infrastructure, workflow automation, and technology training. His background includes support for advanced defense and research programs involving intelligent systems and agent-based technologies, as well as prior work as a Senior Research Scientist at Intel contributing to multi-agent systems research and related standards activities. He has extensive experience leading enterprise workflow and technology implementations, integrations, and implementation governance. Mike also serves as a professor at the University of Charleston, teaching artificial intelligence, software engineering, data analytics, and applied technology, bringing both technical depth and practical delivery leadership to the KnowledgeView project.	Executive oversight, escalation support, and customer relationship management.
Project Management Team	Dr. Tammie Hertel (Engagement Manager / OCM Specialist) Doctorate in Organizational Change Management with over 35 years of experience as in enterprise technology adoption, workforce enablement, instructional design and training development. She has led training and organizational development initiatives for organizations including Intel Corporation and Microchip Technology. She is a recognized expert in change management (ADKAR), virtual collaboration, and user adoption. Her work ensures successful implementation through structured adoption strategies and stakeholder engagement.	Project plan, schedule, risk log, status reporting, and project delivery and coordination.

	<p>Ariana Gonzalez (Project Manager / Business Analyst) Ariana Gonzalez holds a Bachelor of Science in Business Administration from Colorado Mountain College and brings over three years of experience in project management. She specializes in enterprise consulting and business process optimization and has successfully managed complex IT implementations, including data center and customer service platforms. She ensures disciplined execution through structured planning, requirements alignment, and effective stakeholder coordination.</p>	
<p>Solution Architect & GIS Specialist</p>	<p>Grantas Dapkus (Technical Lead / Full Stack Engineer) Grantas holds a Bachelor of Science in Computer Science with a minor in Mathematics from Northern Michigan University. He brings over 6 years of experience in SaaS platforms, full-stack development, and workflow automation systems. He leads architecture design and technical implementation, with expertise in platform-as-a-service environments, machine learning, and integrations. He also specializes and leads architecture design and delivery ensuring alignment with enterprise and regulatory requirements as well as secure, scalable, and sustainable.</p>	<p><u>Solution Architect:</u> Architecture, security design, workflow model, and integration strategy.</p> <p><u>GIS Specialist:</u> GIS ingestion, coordinate normalization, spatial analysis, and AoR visualization support.</p>
<p>AI Engineer</p>	<p>Michael Garrett (Software Engineer / ML Specialist) Michael holds a dual Bachelor of Science degree in Computer Science and Data Analytics from the University of Charleston and is AWS Certified as a Cloud Practitioner. He brings over 3 years of experience and expertise in building solutions across AWS, platform-as-a-service environments, and modern web stacks. He specializes in machine learning, AI-enabled workflows, and automation, focusing on improving efficiency, reducing manual processes, and ensuring system traceability.</p>	<p>RAG, agent workflows, validation, model routing, and token controls.</p>
<p>Cloud Engineer</p>	<p>Isaac Arzu (Junior Developer / Platform Engineer) Isaac holds a Bachelor of Science in Computer Science from the University of Charleston with experience in enterprise platform implementation, workflow configuration, integration support, and system optimization. His background includes supporting instructional delivery and is extensively involved in training programs bridging the gap between system design and user adoption. He focuses on building usable, efficient systems that support workflow automation and seamless integration across platforms.</p>	<p>AWS deployment, Terraform, monitoring, encryption, and infrastructure operations.</p>
<p>Additional Intern Resource *Optional- see section 19.2 below</p>	<p>Natalie Feliciano (Intern Junior Developer – AI/ML Focus) Natalie is currently pursuing a degree in Computer Science at Arizona State University and has completed the Global Career Accelerator program in Web Development where she earned certifications in; AI Professional Skills, Intercultural Collaboration, and AI-Powered JavaScript Development, and was awarded as a finalist in the 2025 Kode With Klossy x Goldman Sachs Machine Learning Challenge. She</p>	<p>She contributes to front-end and API development data preparation and testing Support for AI-enabled features and system validation</p>

	contributes to front-end and API development, data preparation, testing, and support for AI-enabled features and system validation.	
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19.2 Supporting Resources (*Optional Workforce Development)

BizSolutions.Tech may incorporate additional support resources, including interns from the University of Charleston and Arizona State University, to assist with testing, data preparation, and validation activities. **Use of interns is optional and subject to WVDEP approval**, ensuring no dependency on student resources while offering an opportunity to support workforce development and introduce emerging talent into real-world regulatory technology environments without impacting project delivery commitments.

19.3 Mandatory Qualification Requirements

This subsection addresses all mandatory requirements defined in RFP Section 4.4.2 and mapped in Appendix C.

19.4 Security, Compliance, and Confidentiality

BizSolutions.Tech agrees and is prepared to execute all official and required confidentiality agreements upon contract award. The FedRAMP Documentation and Insurance Compliance is consistent with RFP requirements and items clarified in Addendum #1. BizSolutions.Tech ensures compliance operation entirely within required FedRAMP Moderate security boundaries such as:

- Encryption at rest and in transit
- Role-Based Access Control (RBAC) and Multi-Factor Authentication (MFA)
- Explainable AI with validation and hallucination controls
- Full audit logging and traceability
- BizSolutions.Tech will provide FedRAMP Moderate authorization documentation from the SaaS platform provider as permitted under Addendum #1 (Q57–Q58) upon request or prior to contract award. All system components, including AI workflows and APIs, will operate entirely within the FedRAMP boundary, in accordance with Addendum #1 (Q22, Q26).
- BizSolutions.Tech will provide proof of required insurance coverage upon request or prior to contract award including Commercial General Liability Insurance and Cyber Liability Insurance. Both insurance policies will meet or exceed the coverage limits specified in the solicitation.

20. Training and Change Enablement

BizSolutions.Tech will provide role-based training to support adoption of the KnowledgeView platform. Training will focus on practical use of the KnowledgeView portal, reviewer dashboard, HITL tasks, evidence review, GIS review outputs, document generation, reporting, accessibility-aware usage, security responsibilities, and administration. Training will use a blended delivery model that includes in-person training for WVDEP reviewers, supervisors, administrators, and technical users; recorded video training and quick reference guides for external applicants and submitters; and live virtual refresher sessions and office hours during pilot and hypercare.

- Reviewer training for application review, evidence review, approvals, comments, and overrides.
- Supervisor training for dashboards, workload visibility, escalations, and final approvals.
- Administrator training for user roles, configuration, reports, monitoring, and support workflows.

- External applicant/submitter training through short, recorded videos and quick reference guides covering registration, application submission, document upload, deficiency response, and status tracking.
- Security and data handling guidance for PII/CBI, audit records, approved AI use, and FedRAMP-boundary operating practices.
- AI transparency training covering citations, confidence scores, AI Decision Records, and human approval responsibilities.
- Quick reference guides and recorded training videos.
- Go-live support and open office hours during hypercare.

Training Area	Audience	Format	Duration
Platform Overview	WVDEP users, supervisors, administrators	In-person or live virtual	1 hour
Reviewer / HITL Training	Reviewers and senior reviewers	In-person hands-on	2–3 hours
Supervisor Dashboard Training	Supervisors and program managers	In-person or live virtual	1 hour
Administrator Training	WVDEP admins / support users	In-person hands-on	3 hours
Applicant / Submitter Training	External applicants and consultants	Recorded video + quick guide	20–30 minutes
Security and Data Handling	WVDEP users, admins, IT/security	Live virtual or in-person	1–2 hours
AI Decision Records and Audit Trail	Reviewers, supervisors, compliance/legal users	Live virtual or in-person	1–1.5 hours
Go-Live Refresher / Office Hours	All WVDEP users	Live virtual	1 hour/session

21. Support, Maintenance, and Warranty

Support and maintenance will begin upon written system acceptance by WVDEP. BizSolutions.Tech will provide standard business-hours support, a technical account manager, monthly service reviews, quarterly business reviews, SLA reporting, operational monitoring, security support, and ongoing optimization support. The production service will be designed to support 99.9% platform availability excluding scheduled maintenance.

- Assistance with software configuration and cloud environment optimization for performance and cost control.
- Troubleshooting and secure remote support.
- Monthly service review meetings and quarterly business reviews.
- SLA reporting for uptime, incident response, support activity, and platform health.
- Planned maintenance windows, patching cadence, and 30-day advance notice for major upgrades where applicable.
- Additional AI system training and workflow refinement as needed.
- Stabilization warranty following system acceptance for automation breakages or system failures caused by minor updates or environment changes.

22. Deliverables

Deliverable Area	Included Deliverables
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Project Initiation	Kickoff materials, project plan, communication plan, risk log, requirements validation.
Cloud Foundation	AWS FedRAMP-ready, serverless-first architecture; environments, networking, storage, identity integration, KMS encryption, monitoring, logging, backup/DR, and FedRAMP boundary documentation support.
KnowledgeView Platform	Authenticated applicant intake, reviewer dashboard, workflow engine, HITL task queue, status tracking, export packages, and Addendum-defined integrations.
AI Agent Suite	Digital intake, routing, completeness, technical extraction, AoR parameter accounting, drafting, public notice, comment response, regulatory watchdog, and AI Decision Records.
RAG and GraphRAG	Regulatory library, document retrieval, citations, knowledge graph relationships.
Document Intelligence	PDF parsing, OCR, attachment extraction, document classification, draft generation.
GIS Intelligence	GIS ingestion, map viewer, AoR support, spatial overlays, ESRI workflow evidence capture, topology/data quality checks as applicable, and reviewer-output tracking.
Security and Compliance	RBAC, SSO/MFA, OneLogin/Active Directory integration, encryption, audit logs, FedRAMP evidence support, vulnerability management, Section 508 validation, and privacy controls.
Reporting	Operational dashboards, token usage reporting, audit reports, access/security reports, AI Decision Records, workload metrics, and invoice reconciliation support.
Training and Support	Training materials, recorded sessions, go-live support, hypercare, service reviews.

23. Risk Management

Risk	Mitigation
AI hallucination or unsupported output	Use RAG, citations, confidence scores, validation rules, and human approval gates.
GIS data complexity	Use ESRI as the authoritative GIS environment, validate formats early, support GIS workflow/evidence capture, and avoid replacing reviewer-performed advanced modeling.
Legacy system constraints	Use Addendum-defined integrations for WV OSSP, OneLogin, and Active Directory; rely on standalone HITL workflow and export packages for legacy records updates unless direct integration is approved.
Cloud compliance complexity	Use AWS FedRAMP Moderate authorized environment; keep application services, AI workflows, model endpoints, data processing, and logs within the approved boundary.
Token cost growth	Use token metering, budget alerts, model routing, caching, summarization, chunking, and change order controls. Token usage will be tracked by application, workflow, model, and agent.
User adoption	Provide role-based training, practical guides, pilot deployment, and hypercare support.

24. Proposal Assumptions

- The following assumptions reflect the RFP and Addendum #1 clarifications and will be validated during discovery.
- WVDEP will provide access to required templates, checklists, SOPs, sample applications where available, GIS layers, regulatory requirements, and subject matter experts.
- WVDEP will identify authoritative data sources and integration points during discovery, including WV OSSP, OneLogin, Active Directory, and approved public or agency data sources.

- Production hosting will occur in AWS FedRAMP Moderate authorized cloud environment approved by WVDEP.
- The application, workflows, AI processing, model endpoints, data stores, and logs will remain inside the approved FedRAMP Moderate boundary.
- Final regulatory decisions will remain with authorized WVDEP personnel.
- No AppEnhancer integration, ESS write-back, or large historical Class I/Class VI data migration is included in the base scope unless authorized through future change control.
- Advanced GIS modeling and reservoir/plume modeling will be performed by WVDEP reviewers or approved tools outside KnowledgeView; KnowledgeView will capture submitted parameters, workflow evidence, reviewer findings, and audit history.
- Pricing information will be provided in a separately sealed cost proposal as required by the solicitation.

25. Conclusion

KnowledgeView provides WVDEP with a balanced approach to AI-enabled modernization. It combines advanced AI capabilities with structured workflows, human oversight, source-grounded recommendations, GIS intelligence, and full auditability. The result is a platform that can accelerate permitting while maintaining the high standards of control, transparency, and accountability required for regulatory decision-making.

BizSolutions.Tech is prepared to partner with WVDEP to deliver a secure, practical, and scalable solution that supports West Virginia's environmental protection mission and establishes a responsible model for AI-enabled public sector operations.

26. Supplemental Requirement Clarifications Added for Validation

The following clarifications were added to strengthen traceability between the proposal narrative, Appendix C, and the solicitation/addendum requirements. These items do not replace the sealed cost proposal; they document how the technical proposal addresses compliance, governance, operational, and scope-control requirements.

26.1 Contract Term, Licensing, and Renewal

KnowledgeView will align to the solicitation term structure, including the five-year base term and optional one-year renewal. User access will be organized by authorized role, including applicant/submitter, reviewer, senior reviewer, supervisor/program manager, administrator, read-only/auditor, automation/service account, and technical support roles. Pricing and capacity details will remain in the separately sealed cost proposal.

26.2 Regulatory Compliance Engine and Watchdog Agent

The compliance engine will encode WVDEP-approved checklists, regulatory references, validation rules, workflow states, and permit templates. The Watchdog Agent will monitor approved regulatory/reference sources and identify candidate changes for review; no rule, checklist, model-routing, or compliance-logic change will be promoted to production without authorized human review, testing, approval, and audit logging.

26.3 AgentOps Observability and AI Decision Records

KnowledgeView will maintain operational observability across workflow jobs, model calls, agent executions, document-processing tasks, validation events, exceptions, reviewer actions, and token usage. AI Decision Records will capture task

metadata, source references, extracted facts, validation results, confidence scores, reviewer actions, overrides, approval history, and exportable audit evidence. The system will provide defensible decision records rather than exposing raw internal model chain-of-thought.

26.4 Workflow State Controls for Permit Modifications and Applicant Amendments

KnowledgeView will support post-approval permit modification workflows during the permit lifecycle. During active technical review, applicant-side amendments will be locked unless reopened through an official deficiency/correction workflow. Resubmissions, document versions, reviewer comments, and NoD/correction responses will be retained in the audit trail.

26.5 SLA, Updates, Patching, and Model Change Controls

KnowledgeView operations will include availability monitoring, incident-response support, support reporting, scheduled maintenance, security patching, vulnerability remediation tracking, and controlled release management. Material AI model, prompt, guardrail, or compliance-logic changes will follow governance review before production use.

26.6 Proposal Compliance and Addendum Scope Clarifications

BizSolutions.Tech will submit the technical and cost proposals as separate sealed submissions, acknowledge applicable addenda, and provide required forms and signatures with the final submission package. The technical solution assumes PDF-first applicant submission, no WVDEP scanning obligation for initial submission, no base-scope AppEnhancer integration or ESS write-back, no large historical Class I/Class VI migration, and no requirement for KnowledgeView to perform reservoir simulation or CO2 plume modeling.

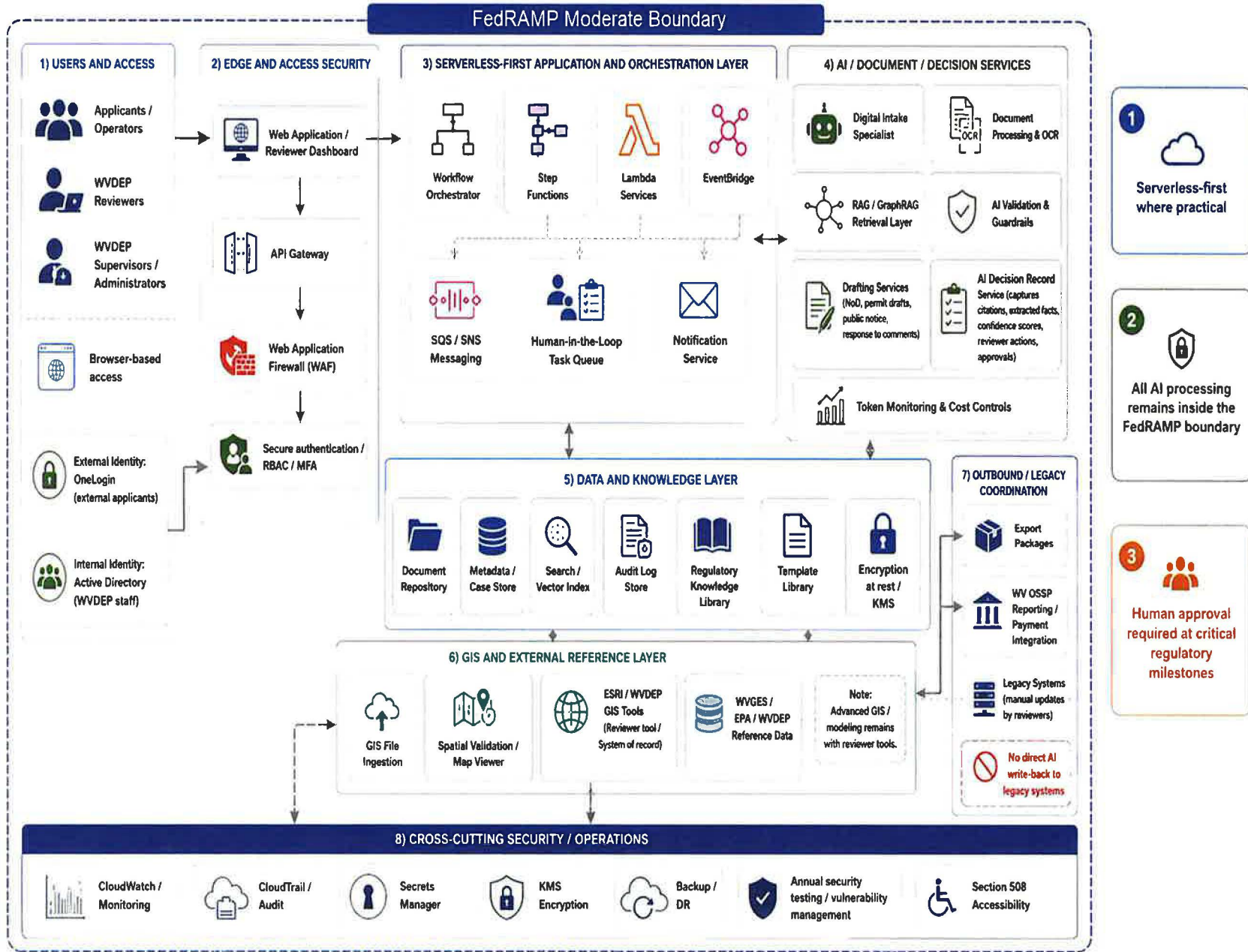
KnowledgeView AI Permitting Platform – Technical Architecture (Serverless-First / FedRAMP Moderate Boundary)

WVDEP UIC Class I & Class VI Workflow Based Agentic AI, Automation, and E-Permitting System

WVDEP CRFP 0313 DEP2600000003

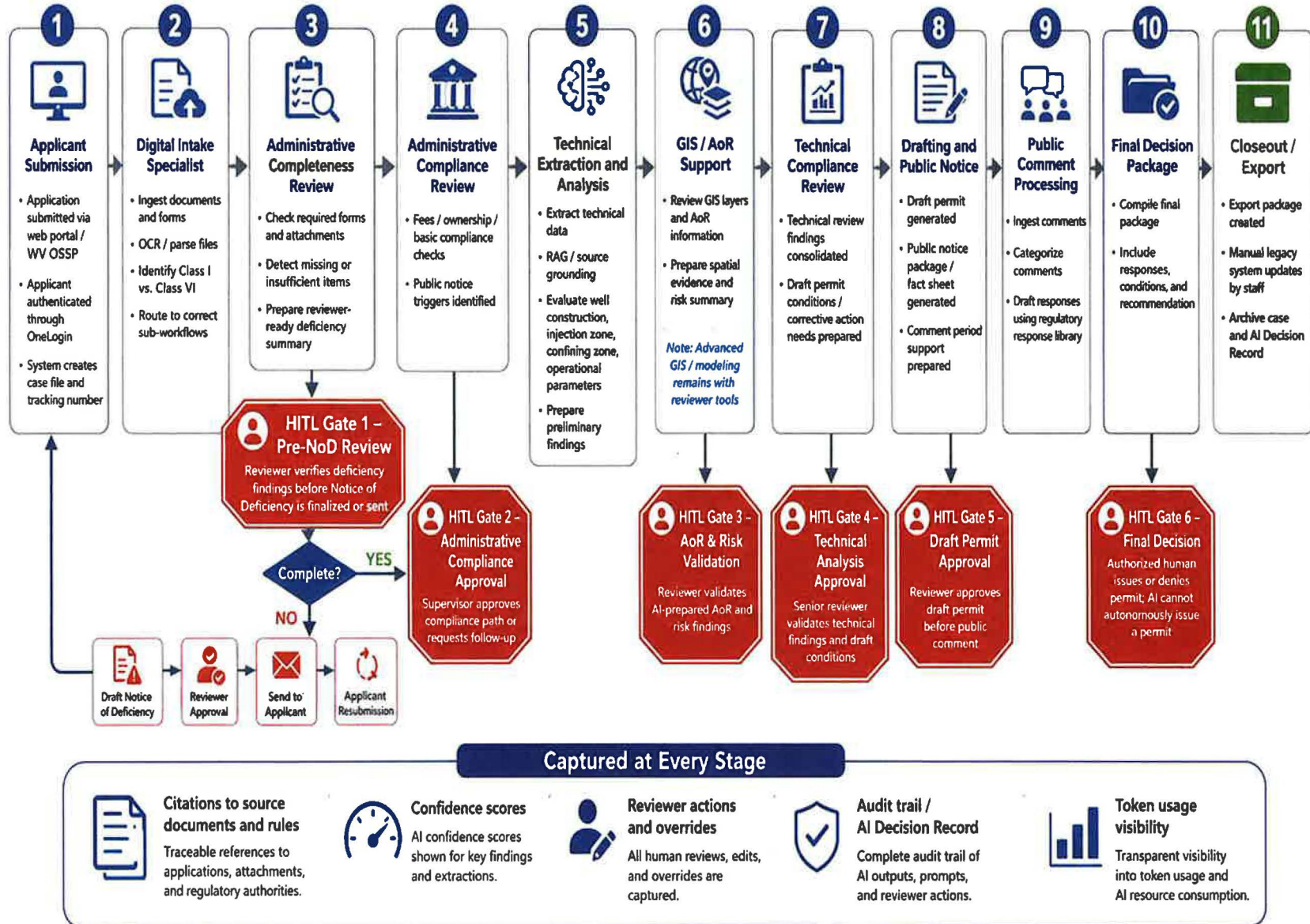
KnowledgeView AI Permitting Platform

Appendix A: Detailed Architecture Diagram





KnowledgeView AI Permitting Platform – Workflow / HITL Diagram




WVDEP UIC Class I & Class VI Permit Review Workflow





AI assists. Humans decide. Permits are issued or denied by authorized WVDEP staff.




Appendix C: Requirements Alignment Matrix

CRFP Referenced Section # and Associated Technical Proposal Section	Corresponding Requirement	Approach	Current Status
<p>4.1</p> <p>See Technical Proposal Sections 1, 2, 2.3, 5, 7, 10, 12, 14, 17, 22;</p>	<p>Workflow Based Agentic AI, Automation, and E-Permitting System</p> <p>Provide a system to streamline UIC Class I and Class VI permit review with AI-enabled automation, GIS integration, document processing, and mandatory HITL decision gates.</p>	<p>KnowledgeView will operate as a governed AI permitting workspace for UIC Class I and Class VI reviews, using agentic workflows, regulatory checklists, document intelligence, GIS review support, and mandatory HITL approvals.</p> <p>Architecture components: AWS FedRAMP boundary, Applicant Portal, Reviewer Dashboard, API Gateway, WAF, Step Functions, Lambda, EventBridge, SQS/SNS, AI/RAG services, Document Repository, Audit Log Store, CloudWatch, CloudTrail, KMS.</p>	<p> YES</p>
<p>4.2</p> <p>See Technical Proposal Sections 4, 5, 12, 13, 21, 22, 24;</p>	<p>SaaS Delivery Model</p> <p>Application must be delivered as cloud-based SaaS, hosted and managed by vendor, accessed by secure web browsers or authorized interfaces.</p>	<p>KnowledgeView will be delivered as a managed SaaS platform with secure browser access, role-based dashboards, vendor-managed operations, and serverless-first services where practical.</p> <p>Architecture components: AWS FedRAMP, API Gateway, WAF, serverless workflow services, managed data stores, CloudWatch monitoring, CloudTrail audit logging, KMS encryption, and Section 508 compliant UI components.</p>	<p> YES</p>



<p>4.2</p> <p>See Technical Proposal Sections 5, 12, 12.1, 13, 16, 24;</p>	<p>FedRAMP Moderate SaaS Compliance SaaS offering must comply with FedRAMP Moderate authorization requirements including continuous monitoring, security baselines, and ATO support using FedRAMP artifacts.</p>	<p>KnowledgeView will run inside the AWS FedRAMP Moderate boundary using FedRAMP-authorized services and application controls mapped to NIST SP 800-53.</p> <p>Architecture components: AWS FedRAMP boundary, API Gateway, Lambda/Step Functions, managed database and object storage, CloudTrail, CloudWatch, KMS, Secrets Manager, IAM/RBAC, vulnerability management, and compliance evidence artifacts.</p>	<p> YES</p>
<p>4.2</p> <p>See Technical Proposal Sections 12, 13, 20, 21, 22;</p>	<p>99.9% Availability, Updates, Scalability, Data Sovereignty, SLAs, Section 508 Provide predictable subscription licensing, 99.9% availability excluding scheduled maintenance, automatic updates/patches/model improvements, HA/elastic scalability, U.S. data sovereignty, SLAs, and Section 508 conformance.</p>	<p>KnowledgeView will support 99.9% availability targets through managed cloud services, controlled maintenance windows, U.S.-only data residency, SLA reporting, patch management, and accessibility validation.</p> <p>Architecture components: Multi-Availability Zone managed data stores, S3 document storage, backup/DR services, CloudWatch alarms, WAF, CloudTrail, KMS, and Section 508-ready web interface.</p>	<p> YES</p>
<p>4.3- 4.3.2</p> <p>See Technical Proposal Sections 15, 21, 24; separately sealed cost proposal</p>	<p>Term of Service and Renewal Initial term is five years with option for one additional one-year renewal.</p>	<p>The cost, licensing, support, and renewal model will align to the five-year base term and optional sixth-year renewal, with usage visibility and predictable operating controls.</p> <p>Architecture components: token metering service, usage dashboards, CloudWatch metrics, audit reporting,</p>	<p> YES</p>




		billing/export reports, and configurable subscription/licensing controls.	
<p>4.3.2.1.1</p> <p>See Technical Proposal Sections 7.1, 11, 12, 12.1, 13, 22, 24;</p>	<p>System Automation / Integration</p> <p>Demonstrate integration with existing operational software applications.</p>	<p>KnowledgeView will integrate with the addendum-confirmed systems: WV OSSP for reporting/payment coordination, OneLogin for external users, and Active Directory for internal users. Legacy system updates will remain human-mediated unless separately approved.</p> <p>Architecture components: API Gateway, integration adapters, EventBridge, SQS/SNS, secure file/API exchange, OneLogin SSO, Active Directory integration, and export package service.</p>	<p>✔ YES</p>
<p>4.3.2.1.2</p> <p>See Technical Proposal Sections 7.1, 12, 15, 20, 22;</p>	<p>Dashboard Development</p> <p>Develop web-based HTML dashboard for job control and logs with secure login/password capability and authorized personnel restrictions.</p>	<p>KnowledgeView will provide reviewer and administrator dashboards for application status, workflow execution, HITL queues, job logs, token usage, audit events, and system health.</p> <p>Architecture components: Applicant Portal, Reviewer Dashboard, API Gateway, WAF, CloudWatch dashboards, audit log store, workflow engine, RBAC/MFA, and notification service.</p>	<p>✔ YES</p>
<p>4.3.2.2.1</p> <p>See Technical Proposal Sections 7.2, 7.4, 9, 10, 17, 22;</p>	<p>Digital Intake Specialist</p> <p>System should function as Digital Intake Specialist executing multi-stage regulatory review.</p>	<p>KnowledgeView will prioritize the Digital Intake Specialist capability for early rollout, including authenticated intake, document classification, permit type identification, checklist review,</p>	<p>✔ YES</p>

		<p>deficiency summary, and workflow routing.</p> <p>Architecture components: WV OSSP intake integration, OneLogin, API Gateway, S3 document repository, OCR/document processing, Lambda, Step Functions, EventBridge, and metadata/case store.</p>	
<p>4.3.2.2.1.1</p> <p>See Technical Proposal Sections 7.3, 10, 12, 14, 18, 22;</p>	<p>Agentic Routing and Sub-Workflow Orchestration Determine Class I or Class VI processing and route to workflows including AoR, financial responsibility, corrective action, and construction standards based on application data.</p>	<p>KnowledgeView will classify Class I versus Class VI applications and dynamically trigger sub-workflows for administrative review, AoR support, financial responsibility, corrective action, construction standards, drafting, and public comment handling.</p> <p>Architecture components: Step Functions workflow orchestration, Lambda services, EventBridge rules, SQS task queues, AI/RAG services, and HITL task queue.</p>	<p> YES</p>
<p>4.3.2.2.1.2</p> <p>See Technical Proposal Sections 7.4, 9, 9.1, 10, 22;</p>	<p>Administrative Completeness Review Confirm required application sections, plans, maps, AoR calculations, EPA Form 7520-6, location/legal description, operator ID, well construction, injection zone, confining zone, injection rates/volumes/pressures, and fluid characterization.</p>	<p>KnowledgeView will compare submitted materials against WVDEP-approved checklists and produce reviewer-ready completeness findings with citations to source documents.</p> <p>Architecture components: document intelligence/OCR, S3 document repository, metadata/case store, regulatory knowledge library, RAG/vector index, checklist rules engine, and AI Decision Record service.</p>	<p> YES</p>

<p>4.3.2.2.1.2</p> <p>See Technical Proposal Sections 7.4, 7.5, 9, 9.1, 10, 22;</p>	<p>Class VI Additional Completeness For Class VI: geologic characterization, TMP, Injection Well Plugging Plan, PISC Plan, Emergency and Remedial Response Plan, Financial Responsibility; use Computer Vision and NLP to verify signatures/certification statements.</p>	<p>KnowledgeView will include Class VI completeness checks for geologic characterization, TMP, plugging plan, PISC plan, emergency/remedial response, financial responsibility, responsible officer signatures, and certification statements.</p> <p>Architecture components: OCR/document extraction, checklist rules engine, regulatory library, AI/RAG layer, template library, S3, metadata store, and HITL review queue.</p>	<p> YES</p>
<p>4.3.2.2.1.3</p> <p>See Technical Proposal Sections 7.5, 8, 8.1, 9, 10, 14, 24;</p>	<p>Technical Compliance Review Confirm submitted responses meet regulatory standards through advanced extraction and geological validation including zones, USDWs, well construction, operational parameters.</p>	<p>KnowledgeView will extract and organize technical parameters for reviewer validation, including injection zone, confining zone, well construction, pressures, volumes, monitoring plans, and operational parameters. The system will not perform reservoir or CO2 plume modeling.</p> <p>Architecture components: document intelligence, AI/RAG layer, technical parameter extraction service, GIS evidence capture, regulatory rules engine, and HITL technical review queue.</p>	<p> YES</p>
<p>4.3.2.2.2</p> <p>See Technical Proposal Sections 4.1, 7.6, 7.8, 12, 12.1, 14, 22;</p>	<p>RAG / GraphRAG / Source Grounding Use RAG and preferably GraphRAG or similar retrieval to map relationships among regulations, geologic data, permit history, and submitted documents;</p>	<p>KnowledgeView will use source-grounded RAG and GraphRAG-style relationship mapping to connect regulations, submitted evidence, application data, GIS features, and review findings.</p>	<p> YES</p>

	prevent irrelevant/outdated information.	Architecture components: regulatory knowledge library, vector/search index, knowledge graph metadata, AI/RAG service, source citation store, document repository, and AI Decision Record service.	
4.3.2.2.3 See Technical Proposal Sections 7.7, 10, 14, 23;	Hallucination Mitigation Implement robust guardrails to minimize hallucinations.	KnowledgeView will reduce hallucination risk through retrieval grounding, structured outputs, required citations, confidence scores, validation rules, policy guardrails, and mandatory human approval. Architecture components: AI validation/guardrail service, RAG layer, rules engine, confidence scoring, HITL queue, audit log store, and AI Decision Records.	✔ YES
4.3.2.2.4 See Technical Proposal Sections 13, 14, 18, 23;	Automated and Continuous AI Validation Provide continuous AI security against malicious requests, unsafe approvals, unauthorized access, policy violations, and unintended harm.	KnowledgeView will provide continuous AI security controls, including prompt injection defense, malicious input detection, unsafe approval prevention, adversarial validation, model monitoring, and validation reporting. Architecture components: AI validation and guardrails service, WAF, security monitoring, CloudWatch, CloudTrail, model monitoring, red-team/adversarial testing workflow, and audit log store.	✔ YES
4.3.2.2.5 See Technical Proposal Sections 7.8, 10, 14, 16, 20;	Citations and Explainability Provide references for all AI-generated interactions, source links, confidence scores, and clear rationale.	KnowledgeView will provide explainability through AI Decision Records instead of raw chain-of-thought, including source citations, extracted facts, applied rule/checklist, confidence score, validation result,	✔ YES

		<p>reviewer action, override reason, and approval history.</p> <p>Architecture components: AI Decision Record service, audit log store, RAG/citation service, document repository, workflow engine, and reviewer dashboard.</p>	
<p>4.3.2.3</p> <p>See Technical Proposal Sections 8, 8.1, 10, 12, 22, 24;</p>	<p>GIS Integration / Visualization / Validation</p> <p>Visualize and validate geographic data integrity; support 2D/3D visualization; ingest Shapefile, GeoJSON, KML, CAD, DWG; standardize coordinate systems.</p>	<p>KnowledgeView will support GIS workflow, visualization, ingestion, spatial evidence capture, and reviewer review support while preserving ESRI/WVDEP tools as the advanced GIS/modeling system of record.</p> <p>Architecture components: GIS file ingestion, map viewer, PostGIS/geospatial store, S3 GIS storage, ESRI/WVDEP GIS integration/output capture, metadata store, and HITL GIS review task.</p>	<p> YES</p>
<p>4.3.2.3.1</p> <p>See Technical Proposal Sections 7.5, 8, 8.1, 10, 12, 24;</p>	<p>Automated Risk Assessment and AoR</p> <p>Support AoR using fixed-radius for Class I and computational modeling methods for Class VI; identify penetrations, faults, USDWs, receptors, and validate Class VI model inputs.</p>	<p>KnowledgeView will support fixed-radius AoR for Class I where data allows and will account for Class VI modeling parameters and submitted outputs for reviewer validation without generating reservoir/plume models.</p> <p>Architecture components: GIS engine, PostGIS, map viewer, technical parameter extraction, AI/RAG, reviewer evidence workspace, and AoR/Risk HITL gate.</p>	<p> YES</p>

<p>4.3.2.3.2</p> <p>See Technical Proposal Sections 8, 8.1, 11, 12, 22, 24;</p>	<p>GIS Data Integration and Correlation</p> <p>Correlate applicant data with property/plats, WVGES, EPA SDWIS, WV Office of Oil and Gas, WVDEP databases, and detect conflicts.</p>	<p>KnowledgeView will correlate applicant GIS data with approved external/reference sources where interfaces are available, including WVGES, WV Office of Oil and Gas, EPA/WVDEP sources, and WVDEP-provided datasets.</p> <p>Architecture components: integration adapters, API Gateway, scheduled jobs/EventBridge, GIS engine, PostGIS, S3, reference data store, and reviewer validation dashboard.</p>	<p> YES</p>
<p>4.3.2.4</p> <p>See Technical Proposal Sections 9, 9.1, 12, 22, 24;</p>	<p>PDF Parsing and OCR</p> <p>Extract data from PDF permit applications including scanned images via OCR.</p>	<p>KnowledgeView will extract information from PDF application packages, including scanned or image-based documents, and prepare structured data for review.</p> <p>Architecture components: S3 document repository, OCR/document processing service, document classification, metadata/case store, RAG/vector index, Lambda processing, and audit log store.</p>	<p> YES</p>
<p>4.3.2.4.1</p> <p>See Technical Proposal Sections 8, 9, 9.1, 12, 22, 24;</p>	<p>Engineering Blueprint Vision Agents</p> <p>Use specialized vision agents for engineering schematics, database information, web data, shapefile and CAD drawings to extract technical data from visual diagrams.</p>	<p>KnowledgeView will support blueprint and engineering diagram extraction for PDF-based well construction diagrams and attachments, with CAD/DWG support handled through conversion or external GIS/CAD tooling where required.</p> <p>Architecture components: document intelligence, OCR/vision extraction service, S3 repository, conversion</p>	<p> YES</p>




		workflow, metadata extraction, GIS engine, and reviewer validation queue.	
<p>4.3.2.4.2</p> <p>See Technical Proposal Sections 9, 9.1, 10, 14, 22;</p>	<p>AI Draft Permit Generation</p> <p>Generate formatted permit drafts using WVDEP templates, including Class I/VI conditions, operating, monitoring, plugging, emergency response, PISC, etc.</p>	<p>KnowledgeView will generate draft permit sections and preliminary documents using WVDEP templates and source-grounded findings, with all output subject to human review.</p> <p>Architecture components: AI drafting service, template library, regulatory knowledge library, RAG/citations, document generation service, HITL draft permit approval gate, and audit log store.</p>	<p>✔ YES</p>
<p>4.3.2.4.3</p> <p>See Technical Proposal Sections 7.2, 7.4, 9, 10, 22;</p>	<p>Completeness Determination via E-Form / Attachments</p> <p>Check documents submitted via e-form permit application and attachment sections against Class I/VI regulatory checklists.</p>	<p>KnowledgeView will support authenticated application intake and checklist-based completeness determination using e-form data, attached documents, and WVDEP-approved checklists.</p> <p>Architecture components: Applicant Portal/WV OSSP intake, OneLogin authentication, API Gateway, document repository, rules/checklist engine, document intelligence, workflow engine, and HITL queue.</p>	<p>✔ YES</p>
<p>4.3.2.4.4</p> <p>See Technical Proposal Sections 7.4, 9, 9.1, 10, 22;</p>	<p>Notice of Deficiency Generation</p> <p>Generate draft NoD email or letter for staff review/approval before transmission, specifying missing/insufficient items.</p>	<p>KnowledgeView will generate draft Notices of Deficiency with itemized missing or insufficient items, source references, and reviewer approval before release.</p> <p>Architecture components: checklist rules engine, AI drafting service,</p>	<p>✔ YES</p>




		template library, source citation store, notification service, HITL Pre-NoD gate, and audit log store.	
<p>4.3.2.4.5</p> <p>See Technical Proposal Sections 9, 9.1, 10, 22;</p>	<p>Public Notice Document Generation</p> <p>Generate public notice documents compliant with 40 CFR 124/state requirements, fact sheets, recipient lists, comment period deadline calculations.</p>	<p>KnowledgeView will prepare public notice packets, fact sheets, recipient lists, and comment deadline tracking for reviewer approval.</p> <p>Architecture components: AI drafting service, template library, workflow engine, notification/event service, regulatory knowledge library, case store, and HITL draft/public notice approval gate.</p>	<p>✔ YES</p>
<p>4.3.2.4.6</p> <p>See Technical Proposal Sections 9, 9.1, 10, 22;</p>	<p>Response to Comments</p> <p>Ingest and categorize public comments, generate draft responses using regulatory library, flag substantive comments, compile response document.</p>	<p>KnowledgeView will ingest, categorize, and summarize public comments, group duplicate themes, draft responses using the regulatory response library, and flag substantive technical comments for reviewer action.</p> <p>Architecture components: document/comment intake, AI classification/summarization, RAG/regulatory response library, workflow engine, HITL review queue, and response-to-comments document generator.</p>	<p>✔ YES</p>
<p>4.3.2.5.1</p> <p>See Technical Proposal Sections 7.2, 11, 12, 13, 22, 24;</p>	<p>Secure Submission Handling</p> <p>Retrieve applications submitted via web portal or secure agency-controlled gateway; generate unique application tracking number</p>	<p>KnowledgeView will create a unique case file and tracking number when an authenticated submission or OSSP-triggered intake is received.</p> <p>Architecture components: WV OSSP integration, Applicant Portal, API</p>	<p>✔ YES</p>


	and electronic case file upon submission.	Gateway, OneLogin, metadata/case store, S3 document repository, Step Functions, EventBridge, and audit log store.	
<p>4.3.2.5.2</p> <p>See Technical Proposal Sections 7.1, 7.8, 10, 12, 13, 14, 16, 22;</p>	<p>Agency Logs and Deep Observability</p> <p>Create adjacent agency folder/logs; all automation auditable for WVDEP retention policy or 5 years if not defined.</p>	<p>KnowledgeView will maintain exportable agency logs, workflow history, decision records, reviewer actions, overrides, and security/activity reports for at least five years unless WVDEP requires a longer retention period.</p> <p>Architecture components: CloudTrail, CloudWatch Logs, application audit log store, AI Decision Record store, S3 log archive, KMS encryption, lifecycle retention policies, and reporting dashboards.</p>	<p>✔ YES</p>
<p>4.3.2.5.3</p> <p>See Technical Proposal Sections 7.8, 10, 14, 16, 18, 22;</p>	<p>AgentOps Observability / Decision Logic</p> <p>Capture step-by-step reasoning process for legal defensibility and audibility.</p>	<p>KnowledgeView will capture auditable step-by-step decision records rather than raw model chain-of-thought, documenting the prompt/task, extracted evidence, rules applied, confidence, validation, human review, and final action.</p> <p>Architecture components: AI Decision Record service, RAG/citation service, workflow engine, audit log store, reviewer dashboard, and immutable log archive.</p>	<p>✔ YES</p>
<p>4.3.2.5.4</p> <p>See Technical Proposal Sections 10, 14, 18, 22;</p>	<p>Mandatory HITL Gates</p> <p>Enforce stop points at Pre-NoD, Administrative Compliance, AoR/Risk, Technical Analysis, Draft Permit, and Final Decision.</p>	<p>KnowledgeView will enforce stop points at all required regulatory milestones, preventing autonomous permit issuance or denial and requiring authorized WVDEP human approval.</p>	<p>✔ YES</p>

		<p>Architecture components: HITL task queue, Step Functions approvals, RBAC/MFA, notification service, reviewer dashboard, audit log store, and AI Decision Record service.</p>	
<p>4.3.2.6</p> <p>See Technical Proposal Sections 4.1, 15, 15.1, 15.2, 22;</p>	<p>Token Usage and Cost Management</p> <p>Describe token pricing, predictability, optimization, estimated usage, transparency/reporting, flexibility/future proofing, and cost guarantees.</p>	<p>KnowledgeView will provide token cost visibility by tracking usage by application, workflow stage, agent, model, user, and document set, with thresholds and optimization strategies.</p> <p>Architecture components: token metering service, CloudWatch metrics, usage dashboards, budget alerts, model routing, caching/chunking services, and invoice/reconciliation reports.</p>	<p>✔ YES</p>
<p>4.3.2.7</p> <p>See Technical Proposal Sections 10, 11, 12, 22, 24;</p>	<p>Standalone HITL Interface / Legacy Independence</p> <p>Provide standalone browser-based HITL interface independent of legacy systems; human reviewers process AI requests without AI directly modifying legacy systems.</p>	<p>KnowledgeView will provide a browser-based standalone HITL workspace where reviewers receive AI-generated tasks, inspect source evidence, approve/reject findings, and generate export packages without direct AI write-back to legacy systems.</p> <p>Architecture components: Reviewer Dashboard, HITL task queue, Step Functions, export package service, audit log store, RBAC/MFA, and notification service.</p>	<p>✔ YES</p>
<p>4.3.3.1.1</p> <p>See Technical Proposal Sections 8, 9, 11, 12, 22, 24;</p>	<p>Data Formats</p> <p>Support ingestion of XML, CSV, PDF, GIS layers, Shapefile, GeoJSON, KML,</p>	<p>KnowledgeView will support the required data formats directly or through approved conversion workflows, including XML, CSV, PDF, GIS layers, Shapefile, GeoJSON, KML,</p>	<p>✔ YES</p>



	CAD, DWG, well logs, and standard permit forms.	CAD/DWG, well logs, and standard forms. Architecture components: S3 document/GIS repository, document intelligence, GIS ingestion service, conversion pipeline, metadata/case store, validation rules, and integration adapters.	
4.3.3.1.2 See Technical Proposal Sections 14, 18, 22;	Compliance Engine and Watchdog Agent Adaptable engine encodes Class I/VI UIC requirements; regulatory monitoring Watchdog monitors Federal Register, EPA site, State Legislature feeds 24/7 and alerts staff/suggests rule logic updates.	KnowledgeView will provide configurable Class I/Class VI rules and a Watchdog workflow that monitors external sources, alerts staff to potential regulatory changes, and requires human approval before compliance logic updates. Architecture components: regulatory knowledge library, scheduled EventBridge jobs, Lambda monitoring agents, notification service, rules engine, change control workflow, and audit log store.	✔ YES
4.3.3.1.3 See Technical Proposal Sections 8, 11, 12, 22, 24;	External System Integration / Data Validation Retrieve data validation information for cross-checking from other agency and department systems.	KnowledgeView will retrieve or reference validation data from approved agency, state, federal, and department sources using APIs, DB access, flat file, or scheduled synchronization where available. Architecture components: API Gateway, integration adapters, EventBridge scheduled sync, SQS/SNS, secure file exchange, reference data store, and validation service.	✔ YES




<p>4.3.3.2.1</p> <p>See Technical Proposal Sections 12, 12.1, 13, 16;</p>	<p>Encryption</p> <p>Encrypt data in transit with TLS 1.3 and at rest with AES-256.</p>	<p>KnowledgeView will encrypt data in transit and at rest using approved cryptographic controls.</p> <p>Architecture components: TLS endpoints through API Gateway/ALB, AWS KMS-managed encryption, encrypted S3, encrypted RDS/PostgreSQL, Secrets Manager, IAM policies, and audit logging.</p>	<p> YES</p>
<p>4.3.3.2.2</p> <p>See Technical Proposal Sections 7.1, 7.2, 11, 12, 13;</p>	<p>RBAC and MFA</p> <p>Implement RBAC aligned with WVDEP structure and MFA for all users.</p>	<p>KnowledgeView will provide RBAC aligned to WVDEP roles, including applicants, reviewers, senior reviewers, supervisors, administrators, read-only users, and auditors, with MFA through approved identity providers.</p> <p>Architecture components: OneLogin SSO, Active Directory integration, IAM/RBAC service, API Gateway authorizers, reviewer dashboard permissions, and audit log store.</p>	<p> YES</p>
<p>4.3.3.2.3</p> <p>See Technical Proposal Sections 13, 16, 20, 24;</p>	<p>Privacy and PII / CBI Handling</p> <p>Describe how PII and Confidential Business Information are identified, stored, and protected.</p>	<p>KnowledgeView will identify and protect PII/CBI through classification, tagging, least privilege, encryption, masking/redaction where appropriate, audit logging, and restrictions against public AI or cross-customer model training.</p> <p>Architecture components: sensitive data tagging, document repository, KMS, RBAC, audit log store, AI guardrails, data retention controls, and access reports.</p>	<p> YES</p>

<p>4.3.3.2.4</p> <p>See Technical Proposal Sections 5, 12, 12.1, 13, 24;</p>	<p>Deployment Environment / Hosting</p> <p>Deploy in FedRAMP</p> <p>Moderate authorized cloud such as AWS GovCloud/Azure Government with CONUS data residency.</p>	<p>KnowledgeView will deploy in AWS using FedRAMP-authorized services with U.S. data residency and all application, workflow, data, and AI processing inside the FedRAMP boundary.</p> <p>Architecture components: AWS FedRAMP, API Gateway, Lambda/Step Functions, S3, RDS/PostgreSQL, OpenSearch/vector index, CloudWatch, CloudTrail, KMS, IAM, WAF, and backup/DR services.</p>	<p> YES</p>
<p>4.3.3.2.5</p> <p>See Technical Proposal Sections 7.2, 11, 12, 13;</p>	<p>SSO Integration</p> <p>SSO with WVDEP identity systems via SAML 2.0 or OpenID Connect.</p>	<p>KnowledgeView will support SSO with OneLogin for external applicants and Active Directory for WVDEP internal users using SAML 2.0/OIDC where available.</p> <p>Architecture components: OneLogin, Active Directory, API Gateway authorizers, IAM/RBAC, MFA enforcement, user provisioning, and access audit logs.</p>	<p> YES</p>
<p>4.3.3.2.6</p> <p>See Technical Proposal Sections 13, 21, 23;</p>	<p>Security Assessments</p> <p>Annual third-party penetration testing with results shared, vulnerability scanning, and critical patching within 30 days.</p>	<p>KnowledgeView will include annual third-party penetration testing, vulnerability scanning, critical vulnerability remediation within required timelines, patch management, and results reporting to WVDEP.</p> <p>Architecture components: vulnerability management workflow, WAF, CloudWatch/Security monitoring, CloudTrail, patch/change management process, security</p>	<p> YES</p>



		reporting dashboard, and audit evidence repository.	
<p>4.3.3.3</p> <p>See Technical Proposal Sections 20, 21, 22, 23;</p>	<p>Support and Maintenance Support starts upon written acceptance; acceptance requires testing all requirements and training; provide business-hours support, configuration/cloud optimization, troubleshooting, TAM, monthly reviews, quarterly business reviews, additional AI training, stabilization warranty.</p>	<p>Support and maintenance will begin after written system acceptance and include business-hours support, TAM, monthly service reviews, quarterly business reviews, configuration/cloud optimization, troubleshooting, AI training support, and stabilization warranty.</p> <p>Architecture components: CloudWatch monitoring, incident/support workflow, audit logs, operational dashboards, backup/DR, notification service, and service review reports.</p>	<p> YES</p>
<p>4.3.3.4</p> <p>See Technical Proposal Sections 13, 24; separately sealed cost proposal</p>	<p>Licensing Provide licenses for 4 admin staff, 4 automation staff, and appropriate access for applicants/reviewers/managers.</p>	<p>KnowledgeView licensing will support the required administrative users, automation users, full-access internal users, read-only internal users, reviewers/managers, and registered external OneLogin users.</p> <p>Architecture components: subscription/licensing controls, RBAC, OneLogin, Active Directory, user management dashboard, and access reporting.</p>	<p> YES</p>
<p>4.3.3.5.1 / 5.2</p> <p>See Technical Proposal Sections 12, 12.1, 13, 14, 16, 24;</p>	<p>FedRAMP and NIST Compliance Host in FedRAMP Moderate authorized environment or equivalent; comply with NIST SP 800-53.</p>	<p>KnowledgeView will provide AWS FedRAMP documentation, NIST SP 800-53 control mapping, and application-level security controls to support WVDEP compliance review.</p>	<p> YES</p>




		<p>Architecture components: AWS FedRAMP, FedRAMP service artifacts, CloudTrail, CloudWatch, KMS, IAM/RBAC, WAF, audit evidence repository, and NIST control crosswalk.</p>	
<p>4.3.3.5.3</p> <p>See Technical Proposal Sections 7.8, 10, 13, 14, 16, 22;</p>	<p>Auditability All automation directions/actions recorded for WVDEP retention policy or 5 years if not defined.</p>	<p>KnowledgeView will record all automation actions, AI tasks, prompts/task metadata, extracted data, source citations, validation results, reviewer actions, overrides, approvals, and workflow transitions for the required retention period.</p> <p>Architecture components: AI Decision Record service, audit log store, CloudTrail, CloudWatch Logs, S3 archive, KMS encryption, and reporting dashboards.</p>	<p>✔ YES</p>
<p>4.3.3.5.4</p> <p>See Technical Proposal Sections 13, 20, 22;</p>	<p>Section 508 Compliance All user-facing components conform to Section 508.</p>	<p>KnowledgeView user-facing components will be designed and tested for Section 508 accessibility, including keyboard navigation, labels, contrast, screen-reader support, and accessible forms/tables.</p> <p>Architecture components: Applicant Portal, Reviewer Dashboard, accessibility-tested UI framework, document templates, training materials, and UAT/accessibility validation workflow.</p>	<p>✔ YES</p>
<p>4.3.3.5.5</p> <p>See Technical Proposal Sections 14, 18, 20, 23;</p>	<p>AI Governance Document model training data sources/methodologies, bias testing/mitigation, annual reporting, model performance monitoring/drift detection,</p>	<p>KnowledgeView will document approved model use, data sources, evaluation methods, bias/error testing, drift monitoring, override feedback, and annual AI governance reporting.</p>	<p>✔ YES</p>



	human override at all decision points.	Architecture components: AI governance repository, model monitoring, AI validation/guardrails service, AI Decision Records, reviewer override workflow, CloudWatch metrics, and reporting dashboards.	
4.3.3.5.6 See Technical Proposal Sections 13, 21, 24;	SOC 2 Type II / Right to Audit Annual SOC 2 Type II audit report provided to WVDEP with right to audit.	BizSolutions.Tech will provide AWS/platform FedRAMP evidence, available vendor security artifacts, audit support, and a plan of action for additional SOC 2/StateRAMP/FedRAMP-related evidence where applicable. Architecture components: compliance evidence repository, AWS FedRAMP artifacts, NIST crosswalk, security reports, CloudTrail/CloudWatch logs, and audit support workflow.	 YES
4.3.3.6 See Technical Proposal Sections 16, 24;	Data Ownership and Exit Strategy WVDEP owns all data; no use beyond contracted services; no training models for other customers without consent; no data outside U.S.; export within 30 days in open formats; transition support 90 days; delete within 60 days with certification.	KnowledgeView will preserve WVDEP ownership of all data, prohibit unauthorized use, prevent cross-customer model training, keep data in the U.S., provide open-format export within 30 days, support transition assistance, and provide certified deletion. Architecture components: S3 export packages, document repository, metadata/case store, data export service, retention/lifecycle controls, KMS, secure deletion workflow, and audit certification records.	 YES


<p>4.4</p> <p>See Technical Proposal Sections 3, 6, 19;</p>	<p>Qualifications and Experience Provide qualifications, certifications/degrees, staffing plans, past projects, references, key personnel, and desirable geoscience/environmental engineering expertise.</p>	<p>BizSolutions.Tech will present staffing, experience, certifications, prior project background, and SME/partner strategy for GIS/geoscience/environmental engineering support.</p> <p>Architecture components addressed by key personnel include solution architecture, AI/RAG, AWS FedRAMP, security/compliance, workflow engine, document intelligence, GIS integration, and project governance.</p>	<p> YES</p>
<p>4.4.2</p> <p>See Technical Proposal Sections 13, 14, 16, 20, 24;</p>	<p>Mandatory Qualification Requirements Ensure compliance with data privacy/cybersecurity/AI governance, sign confidentiality agreement, hold current FedRAMP/StateRAMP/SOC 2 Type II certification.</p>	<p>BizSolutions.Tech will comply with privacy, cybersecurity, AI governance, and confidentiality requirements while using AWS FedRAMP evidence and a documented audit/certification action plan.</p> <p>Architecture components: AWS FedRAMP, security/compliance controls, IAM/RBAC, KMS, CloudTrail, CloudWatch, AI governance repository, and audit evidence library.</p>	<p> YES</p>
<p>4.5</p> <p>See Technical Proposal Sections 6, 7, 8, 9, 10, 15, 17;</p>	<p>Oral Presentation / Demo Agency may request oral presentation and informal project demo showing AI capabilities, HITL workflow, GIS integration, and technical approach.</p>	<p>BizSolutions.Tech will prepare a demonstration using synthetic UIC data showing intake, document extraction, checklist review, HITL approvals, GIS concept/output capture, NoD drafting, AI Decision Records, and token reporting.</p> <p>Architecture components: demo tenant, Applicant Portal, Reviewer Dashboard, OCR/document processing,</p>	<p> YES</p>

		AI/RAG layer, HITL queue, GIS viewer, audit log, and token dashboard.	
<p>4.6</p> <p>See Technical Proposal Sections 17, 18, 20, 21, 22;</p>	<p>Implementation Timeline</p> <p>Provide phase-based implementation timeframe with milestones from contract award to full production deployment.</p>	<p>KnowledgeView will use a phased delivery plan aligned to the July 1, 2027, target go-live, with early Digital Intake, followed by full workflows, integrations, UAT, security testing, training, and production launch.</p> <p>Architecture components: project environments, CI/CD pipeline, AWS FedRAMP deployment, workflow engine, integration adapters, test/UAT environment, monitoring, and go-live/hyper-care support.</p>	<p>✔ YES</p>
<p>Addendum #1- Referenced Question # and Associated Technical Proposal Section</p>	<p>Corresponding Answer and Details</p>	<p>Approach</p>	<p>Current Status</p>
<p>Q1, Q21, Q59</p> <p>See Technical Proposal Sections 12, 14, 15, 24;</p>	<p>AI Model Flexibility</p> <p>Any non-prohibited commercial/open-source model acceptable if deployed entirely within FedRAMP Moderate boundary; BYO model allowed with WVDEP/WVOT approval.</p>	<p>KnowledgeView will remain model-agnostic and support WVDEP/WVOT-approved commercial or open-source models if all processing remains inside the FedRAMP Moderate boundary.</p> <p>Architecture components: approved model endpoint or hosted model in AWS FedRAMP, AI/RAG layer, model routing, guardrails, token metering, AI governance repository, and AI Decision Records.</p>	<p>✔ YES</p>
<p>Q6, Q7, Q17, Q18, Q30, Q51, Q61, Q64, Q65</p>	<p>Scope Reduction: No AppEnhancer / Minimal Legacy Data</p> <p>AppEnhancer is not in scope; no migration/AI indexing of</p>	<p>KnowledgeView will focus on new Class I/Class VI applications, WVDEP-provided learning documents, SOPs, templates, and targeted integrations; AppEnhancer and 5-million-document</p>	<p>✔ YES</p>



<p>See Technical Proposal Sections 11, 16, 24;</p>	<p>5M documents; minimal legacy data; no ESS write-back; new Class I/VI app types.</p>	<p>ingestion are excluded from base scope.</p> <p>Architecture components: document repository, regulatory knowledge library, intake workflow, OSSP integration, export package service, and optional future migration/integration adapter.</p>	
<p>Q67, Q68</p> <p>See Technical Proposal Sections 8, 8.1, 24;</p>	<p>GIS System of Record / Advanced Analysis WVDEP uses ESRI desktop/enterprise and advanced GIS/modeling analysis will be done by reviewers in separate system.</p>	<p>KnowledgeView will treat ESRI/WVDEP GIS as the GIS system of record and will capture GIS layers, map context, reviewer outputs, spatial evidence, and workflow status without replacing advanced reviewer GIS/modeling tools.</p> <p>Architecture components: GIS ingestion service, map viewer, PostGIS/geospatial store, ESRI output/reference capture, S3 GIS storage, and HITL GIS review workflow.</p>	<p> YES</p>
<p>Q32, Q56</p> <p>See Cover/Title Page, Technical Proposal Section 24; Appendix C.1; final submission package</p>	<p>Hard Copy Submission Only Online responses are prohibited for RFPs; hard copy submission with separate sealed technical and cost proposals required.</p>	<p>BizSolutions.Tech will meet the hard-copy submission requirement through proposal packaging and compliance process, separate from the solution architecture.</p> <p>Architecture components: not applicable to system architecture; proposal compliance components include sealed technical proposal, sealed cost proposal, Addendum acknowledgement, signature pages, and submission checklist.</p>	<p> YES</p>

<p>Q75</p> <p>See Technical Proposal Sections 7.2, 11, 13, 24;</p>	<p>Registered Users Only No unauthenticated public-facing interface; all users must register.</p>	<p>KnowledgeView will require registered/authenticated access for applicants and WVDEP users; no unauthenticated public submission path will be enabled.</p> <p>Architecture components: OneLogin external SSO, Active Directory internal authentication, API Gateway authorizers, MFA/RBAC, Applicant Portal, Reviewer Dashboard, and access audit logs.</p>	<p> YES</p>
<p>Q47</p> <p>See Technical Proposal Sections 10, 11, 14, 16, 24;</p>	<p>Permit Modification Workflow Permit modifications can be submitted after approval; system should review post-approval modifications during permit life.</p>	<p>KnowledgeView will support post-approval permit modification workflows, including modification intake, document comparison, AI-assisted review, HITL routing, reviewer approval, and audit history.</p> <p>Architecture components: modification workflow in Step Functions, document repository, comparison/extraction service, AI/RAG layer, HITL task queue, case store, and export package service.</p>	<p> YES</p>
<p>Q45</p> <p>See Technical Proposal Sections 7.2, 10, 16, 24;</p>	<p>No In-Review Amendments by Applicant Applicant cannot amend while under technical review; must wait for official correction letter and resubmit.</p>	<p>KnowledgeView will lock applicant editing during active technical review and reopen resubmission only after an official NoD/correction workflow, preserving reviewer control and auditability.</p> <p>Architecture components: case status workflow, RBAC/permissions, Applicant Portal edit controls, NoD/resubmission workflow,</p>	<p> YES</p>

		notification service, audit log store, and document versioning.	
<p>Q33, Q34, Q60</p> <p>See Technical Proposal Sections 7.7, 7.8, 10, 14, 20;</p>	<p>Confidence Thresholds, Overrides, and Audit Records</p> <p>Low-confidence AI determinations may be escalated; mandatory HITL override capability; comprehensive audit records acceptable.</p>	<p>KnowledgeView will use confidence thresholds, escalation queues, mandatory reviewer overrides, override reason capture, and feedback loops to improve future review quality while preserving human authority.</p> <p>Architecture components: AI validation service, confidence scoring, HITL task queue, senior reviewer escalation workflow, AI Decision Records, override log, and governance reporting.</p>	<p> YES</p>
<p>Addendum Acknowledgment</p> <p>See Technical Proposal Cover/Title Page, Section 2.2, Section 24; Appendix C.1; final submission package</p>	<p>Addendum acknowledgment and incorporation. Vendor must acknowledge and incorporate solicitation addenda and clarifications in the proposal response.</p>	<p>Appendix C now includes explicit addendum clarification rows, including Addendum #1 scope, identity, submission, volumetric, PDF, GIS, and AI model clarifications. Final hard-copy package should include the required signed addendum acknowledgment form(s).</p>	<p> YES</p>
<p>Submission Instructions</p> <p>See Technical Proposal Cover/Title Page, Section 24; Appendix C.1; final submission package</p>	<p>Separate sealed technical and cost proposals. Technical proposal must avoid cost information, and cost proposal must be submitted separately as required by the solicitation.</p>	<p>Proposal assumptions and Appendix C confirm that pricing information will be provided in a separately sealed cost proposal. Final packaging should verify that no detailed cost tables are included in the technical proposal.</p>	<p> YES</p>
<p>Title Page / Signature</p> <p>See Technical Proposal Cover/Title Page and Signatures;</p>	<p>Title page and signature information. Include RFP subject/number, vendor name, address, phone, fax, contact person, email, vendor signature, and date.</p>	<p>Cover/title page updated to include phone, fax status, email, proposal date, and reference to the signature page. The signature page includes authorized signatory name, title, and date.</p>	<p> YES</p>

<p>Response Traceability See Technical Proposal Section 6; Appendix C.1</p>	<p>Response reference requirement. Proposal should clearly reference how submitted content applies to each RFP requirement.</p>	<p>Appendix C serves as the requirements alignment matrix and traces each requirement/addendum clarification to the KnowledgeView approach and supporting architecture components.</p>	<p> YES</p>
<p>4.4.1.2 See Technical Proposal Sections 3, 6, 19; Appendix C.1; optional qualifications/reference attachment</p>	<p>References for agentic AI/autonomous system experience. Provide references demonstrating relevant project experience.</p>	<p>Proposal should include or attach allowed references for enterprise workflow, AI-enabled automation, document intelligence, GIS/data integration, cloud delivery, and public-sector implementation experience. References may be provided upon request in a separate qualifications appendix if required.</p>	<p> YES</p>
<p>4.4.1.3 See Technical Proposal Sections 3, 6, 19;</p>	<p>Key personnel involved in referenced project builds. Identify key personnel, roles, and involvement in relevant project work.</p>	<p>Roles and Responsibilities section identifies project roles; final proposal should expand with named key personnel, role summaries, and relationship to referenced project work where permitted.</p>	<p> YES</p>
<p>4.4.2.2 See Technical Proposal Sections 13, 16, 20, 24;</p>	<p>Confidentiality agreement upon contract award. Vendor must agree to sign required confidentiality agreement.</p>	<p>BizSolutions.Tech will sign the required confidentiality agreement upon award and will apply privacy, least-privilege, and audit controls to WVDEP data and CBI/PII handling.</p>	<p> YES</p>
<p>SaaS Operations See Technical Proposal Sections 12, 13, 21, 22;</p>	<p>SLA detail for uptime, performance, incident response, and support. SaaS operations should define service availability, support, and reporting expectations.</p>	<p>Support and maintenance section includes 99.9% availability target, monitoring, SLA reporting, monthly service reviews, support activity reporting, and planned maintenance controls. Final SLA terms should align with the contract and sealed cost proposal.</p>	<p> YES</p>
<p>SaaS Operations See Technical Proposal Sections 13, 14, 18, 21;</p>	<p>Automatic updates, patches, and AI model improvements. Address release management, patches, and controlled model changes.</p>	<p>Supplemental clarification adds release management, security patching, vulnerability remediation tracking, and governance approval for material</p>	<p> YES</p>

		model, prompt, guardrail, or compliance-logic changes.	
<p>AI Security</p> <p>See Technical Proposal Sections 13, 14, 23;</p>	<p>Adversarial validation and AI security testing. Security and validation should include testing against malicious prompts, unsafe approvals, unauthorized access, and policy violations.</p>	<p>AI Governance now explicitly includes adversarial validation, red-team testing, prompt injection defense, malicious document/input detection, unsafe approval prevention, and validation reporting.</p>	<p>✔ YES</p>
<p>Token Allocation</p> <p>See Technical Proposal Sections 15, 15.1, 15.2; separately sealed cost proposal</p>	<p>250 MTOK contractual token capacity. Addendum/cost structure identifies 250 MTOK capacity where each unit equals one MTOK.</p>	<p>Token Usage and Cost Management states expected usage of 10-14 million tokens per application and confirms this falls within the proposed 250 MTOK contractual capacity range, with thresholds and change-order controls for expansion.</p>	<p>✔ YES</p>
<p>Cost Proposal Alignment</p> <p>See Technical Proposal Sections 15, 21, 24; Appendix C.1; separately sealed cost proposal</p>	<p>Cloud data storage overage and custom enhancement labor. These items appear in pricing/cost form context and should be addressed in the sealed cost proposal.</p>	<p>Technical proposal notes capacity controls, usage visibility, and change control. Detailed storage overage pricing and custom enhancement labor rates should remain in the separately sealed cost proposal.</p>	<p>✔ YES</p>
<p>Q2</p> <p>See Technical Proposal Sections 7.5, 8, 8.1, 24;</p>	<p>No reservoir simulation or CO2 plume modeling required. Vendor only accounts for parameters directly stated in the application.</p>	<p>Technical Compliance Review and assumptions clarify that KnowledgeView will extract, account for, and validate submitted modeling parameters, while reservoir simulation and CO2 plume modeling remain with WVDEP reviewers or approved tools.</p>	<p>✔ YES</p>
<p>Q37/Q38</p> <p>See Technical Proposal Sections 9, 9.1, 24;</p>	<p>PDF-first applicant submission and no WVDEP scanning assumption. Permit packages are expected to be submitted by applicants, often as PDFs; WVDEP scanning is not assumed for initial submission.</p>	<p>Document Processing section and assumptions now support a PDF-first ingestion, OCR, page/section identification, metadata capture, and applicant-provided package strategy.</p>	<p>✔ YES</p>

<p>Q40</p> <p>See Technical Proposal Sections 14, 24;</p>	<p>No existing Class I/Class VI review findings library. WVDEP does not have an existing library of review findings for training or retrieval.</p>	<p>Assumptions and AI Governance should treat WVDEP-provided SOPs, templates, regulations, sample materials, and SME validation as the initial knowledge base rather than relying on a historical review-findings corpus.</p>	<p> YES</p>
<p>Q41</p> <p>See Technical Proposal Sections 9, 9.1, 22;</p>	<p>Public comment volume assumption. Public comments may range from approximately 50 to 1,000 depending on public interest.</p>	<p>Public notice and response-to-comments functionality will support comment ingestion, categorization, summarization, draft response support, and reviewer approval workflows sized for variable public comment volumes.</p>	<p> YES</p>

Appendix C.1: Proposal Compliance and Addendum Clarification Items

The following checklist summarizes proposal compliance items, addendum clarifications, and strengthened response areas included for WVDEP validation. Items identified as submission package, certification, audit, or cost-proposal evidence items should be verified against the final signed hard-copy submission, required procurement forms, and separately sealed cost proposal before submission.

Item	Added / Strengthened Response	Validation Note
Addendum acknowledgment	Added to Appendix C as a proposal package compliance item.	Verify signed addendum acknowledgment in final package.
Separate technical and cost proposals	Added to Appendix C and proposal assumptions.	Verify no detailed cost information appears in technical volume.
Title page requirements	Cover table updated with phone, fax status, email, proposal date, and signature-page reference.	Validate final signature/date/fax language.
Confidentiality agreement	Added commitment to sign required agreement upon award.	Confirm any agency-specific form is included if required.
References and key personnel	Added rows for references and key personnel tied to relevant project work.	Add references/key personnel details if required by final response format.
Certification / audit evidence	Marked SOC 2/FedRAMP/StateRAMP evidence-sensitive rows for final confirmation.	Do not overstate vendor-held certification if relying on AWS/platform evidence.
SLA, updates, and patching	Added explicit SaaS operations rows for uptime, support, release management, and model-change governance.	Align final SLA language to contract and support terms.
Watchdog/compliance engine	Added supplemental narrative for rule encoding, monitoring, approvals, and audit logging.	Validate against WVDEP compliance-engine expectations.
Permit modification and amendment locks	Added supplemental narrative and Appendix C rows for modification workflows and applicant edit locks during technical review.	Validate against Addendum Q45/Q47 workflow rules.
PDF-first / no scanning / no modeling clarifications	Added addendum rows for PDF submission, no WVDEP scanning assumption, and no reservoir/plume modeling obligation.	Confirm these assumptions remain consistent with final addenda.

Public comment volume and no prior findings library	Added rows for variable comment volumes and no existing Class I/Class VI findings library.	Use this to validate training/reference-data assumptions.
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Signatures

The undersigned certifies that they are duly authorized to submit this Proposal on behalf of Business Solutions and Technologies, LLC, and that the information contained herein is accurate and complete to the best of their knowledge.

By signing below, Business Solutions and Technologies, LLC submits this Proposal in response to the State of West Virginia Centralized Request for Proposals, CRFP 0313 DEP2600000003, for a Workflow Based Agentic AI, Automation, and E-Permitting System.

Business Solutions and Technologies, LLC:

By: Michael R Stockman

Name: Michael R Stockman

Title: Founder / CEO

Date: June 10, 2026